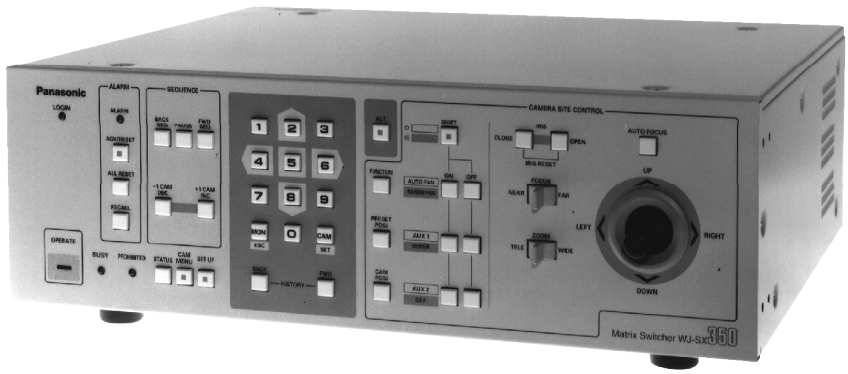
ORDER NO. AVS9904174C8

Service Manual

Matrix Switcher

WJ-SX350



SPECIFICATIONS

General

Power Supply :	220 - 240 V AC 50 Hz
Power Consumption :	45 W
Max. Number of Camera Inputs :	32
Max. Number of Monitor Outputs :	8
Max. Number of Alarm Inputs :	32 (37-pin D-Sub Connector)
Max. Number of Alarm Outputs :	8 (25-pin D-Sub Connector) x2
Max. Number of System Controllers :	4 (WV-CU350)
RS-232C Port :	9-pin D-Sub Connector
RS-485 Terminal :	Half Duplex (A, B, GND) x2
Ambient Operating Temperature :	–10°C - +50°C (14°F - 122°F)
Ambient Operating Humidity :	Less than 90%
Dimensions :	420 (W) x 147 (H) x 350 (D) mm (16-9/16" (W) x 5-13/16" (H) x 13-3/4" (D))
Weight :	10 kg (22 lbs.)
Camera Input/Output (1 - 32) :	1.0 V[p-p]/75Ω composite video signal with 75Ω automatic termination/loop-through
Monitor Output (1 - 8) :	1.0 V[p-p]/75Ω composite video signal
Alarm Input (1 - 32) :	Make Contact or Open Collector Input contact time more than 100 ms Input Load Capacitance; Less than 0.01 µF is required.
Alarm Output (1 - 8) :	Open collector output; 16 V DC 100 mA max.
Reset Output (1 - 8) :	Pulse (VTR (TTL)): +5 V DC 500 ms or Open Collector Output (O.C): +16 V DC 100 mA max.
External Timing Input (1 - 8) :	Pulse 5 V[p-p] interval time more than 1 s
Recover Input (1 - 8) :	Make Contact or Open Collector Input Contact time more than 500 ms Interval time more than 2 s
Data Input Port (1 - 4) :	6-conductor Modular Jack (RS-485, Full Duplex)

Panasonic

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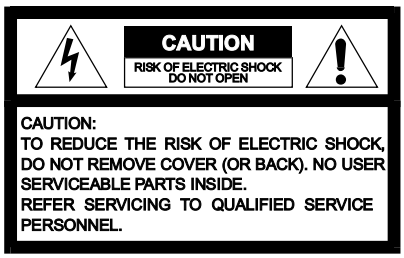
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-radiation, shock, fire, or other hazards. Do not modify the original design without permission of manufacture.

Switching Functions :	Tour Sequence/Group Sequence/Backward Sequence/Forward Sequence/Forward Step/Reverse Step
Camera Functions :	Electronic Shutter: On/Off, Shutter Speed Select Electronic Sensitivity Up Mode Select: Auto/Manual/Off ALC/ELC: ALC/ELC or Manual Automatic Gain Control: On/Off White balance: ATW/AWC Back Light Compensation: Auto/Preset/Off Site Alarm (Motion Detector): On/Off Site Alarm (Motion Detector) Display Mode: On/Off
Lens Functions :	Iris: Open/Close/Preset (only with DC control lens) Focus: Near/Far Zoom: Tele/Wide Auto Focus: Activate
Housing :	Wiper :On/Off, Defroster: On/Off, Camera: On/Off
Pan/Tilt :	Manual Pan: Right/Left, Manual Tilt: Up/Down Auto Pan: On/Off, Random Pan: On/Off, Preset, Home
Auxiliary Switch :	AUX 1 - 2: On/Off
Character Generator :	Camera Title: 30 characters (15 x 2 lines)

Setup Menu

Camera Switching	
Dwell Time :	Min. 1 s to max. 30 s
Max. Number of Sequences :	Tour Sequence 32 (any monitors) Group Sequence 4 (any monitors)
Number of Programming Steps :	32
Timer Event Program	
Timer Events (Start & Stop) :	16/day
Formats of Timer Event Program :	Day of week

Alarm Program	
Max. Number of Alarm Recalls :	99
Alarm Activations :	Mode-1: Any alarms to 1 monitor Mode-2: Any alarms to 4 monitors Mode-3: Any alarms to any monitors (max. 32 patterns)
Timer Alarms (Start & Stop) :	16/day
Formats of Timer Alarm Program :	Day of week
Operator Setup	
Max. Operator Registrations :	15 operators with 5 digit password and priority
Access Operator Levels :	3 levels

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

STANDARD ACCESSORIES

Rack Mounting Bracket . . . . . .2 pcs.
Screws (M4 x 10) . . . . . .8 pcs.

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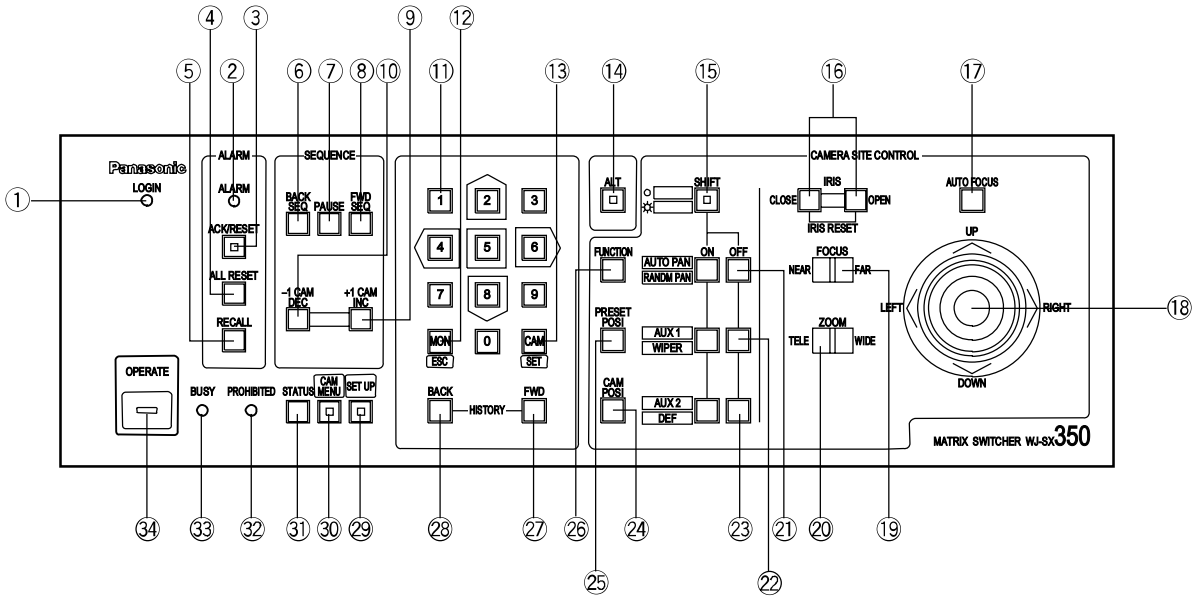
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

<Front View>



1. **Log-in indicator (LOGIN)**
   This indicator lights up when log-in is accomplished.

2. **Alarm indicator (ALARM)**
   This indicator blinks to indicate an alarm condition exists.
   It changes to steady light when the alarm is reset automatically.
   To turn off the indicator, press the ACK/RESET or ALL RESET button.

3. **Alarm Acknowledgment and Reset button (ACK/RESET)**
   This button is used to cancel the activated alarm. You must select the alarmed monitor(s) first to cancel the alarm.
   Press this button once to acknowledge the activated alarm (the indicator blinks rapidly), then press this button once again for alarm reset.

4. **All Alarms Reset button (ALL RESET)**
   This button is used to cancel plural alarms in a lump.
   Select the alarmed monitor first (Monitor 1 for Alarm Mode 1, one of four monitors for Alarm Mode 2), then press this button for alarm reset.

5. **Alarm Recall button (RECALL)**
   This button is used to recall the Alarm Logs (Activated alarm records).
   Select the desired monitor to display the alarm records, then press this button to toggle the display of alarm records On and Off on the selected monitor.

6. **Backward Sequence button (BACK SEQ)**
   This button, in combination with the Numeric buttons, is used to run a Tour or Group sequence in reverse on the selected monitor.
   It is also used to continue a sequence in reverse, that was previously paused on that monitor by the PAUSE button.

7. **Sequence Pause button (PAUSE)**
   This button is used to pause a sequence that is being run on the selected monitor.

8. **Forward Sequence button (FWD SEQ)**
   This button, in combination with the Numeric buttons, is used to run a Tour or Group sequence in forward on the selected monitor.
   It is also used to continue a sequence forward, that was previously paused on that monitor by pressing the PAUSE button.

9. **Increment button (+1CAM INC)**
This button is used to move a sequence one step forward from the step that was previously paused on the selected monitor by pressing the PAUSE button.
Also, when the selected monitor is in the spot mode, pressing this button will replace the selected camera with the next higher camera number.

10. **Decrement button (–1CAM DEC)**
This button is used to move a sequence one step backward from the step that was previously paused on a monitor by pressing the PAUSE button.
Also, when a selected monitor is in the spot mode, pressing this button will replace the currently selected camera with the next lower camera number.

11. **Numeric buttons (0-9)**
These buttons are used for numerical input into the system such as the camera and monitor selection, sequence and preset position, etc.

12. **Monitor/Escape button [MON (ESC)]**
MON: This button is used for monitor selection. Press the desired Numeric buttons, then press this button to select the monitor.
ESC: This button is used to escape and execute the currently highlighted setting on the SETUP MENU of the Matrix Switcher.

13. **Camera/Set button [CAM (SET)]**
CAM: This button is used for camera selection. Press the desired Numeric buttons, then press this button to select the camera.
SET: This button is used to execute the currently highlighted setting on the SETUP MENU of the Matrix Switcher.

14. **Alternate button (ALT)**
This button alternates the original function on two function control buttons with another function, or prepares the CAM MENU button and SET UP button to display the assigned menu or setup table on the selected monitor.

15. **Shift button (SHIFT)**
This button toggles six functions that are assigned to three On and Off button groups (two functions are assigned to each button group).

16. **Iris Control buttons (IRIS)**
These buttons are used to close or open the lens iris of cameras equipped with the specified lens.
When these buttons are pressed at the same time, the lens iris is reset to the factory setting.

17. **Auto Focus button (AUTO FOCUS)**
This button is used to activate the auto focus function, when the specified camera, such as the WV-CSR600 series, is used.

18. **Joystick Controller (UP/DOWN/LEFT/RIGHT)**
This controller is used to operate the Pan/Tilt Head manually, or to move the cursor to the desired position on the setup menu of the Matrix Switcher.
UP: Upward.
DOWN: Downward.
LEFT: Left.
RIGHT: Right.

19. **Focus switch (FOCUS NEAR / FAR)**
This switch is used to adjust the lens focus of cameras equipped with the specified lens.

20. **Zoom switch (ZOOM TELE / WIDE)**
This switch is used for zooming cameras equipped with the specified lens.

21. **ON and OFF buttons for AUTO PAN/RANDM PAN**
These buttons are used to turn On and Off the two camera functions that can be alternated by the SHIFT button.
When SHIFT is in Off position, these buttons turn Auto Panning (AUTO PAN) On and Off.
When SHIFT is in On position, these buttons turn Random Panning (RANDM PAN) On and Off.

22. **ON and OFF buttons for AUX1/WIPER**
These buttons are used to turn On and Off the two camera functions that can be alternated by the SHIFT button.
When SHIFT is in Off position, these buttons turn the Auxiliary 1 (AUX 1) switch On and Off.
When SHIFT is in On position, these buttons turn the wiper (WIPER) switch On and Off.

23. **ON and OFF buttons for AUX2/DEF**
These buttons are used to turn On and Off the two functions that can be alternated by the SHIFT button.
When SHIFT is in Off position, these buttons turn the Auxiliary 2 (AUX 2) switch On and Off.
When SHIFT is in On position, these buttons turn the defroster (DEF) switch On and Off.

24. **Camera Position button (CAM POSI)**
This button, in combination with the Numeric buttons, is used to move the camera to the desired camera position.

25. **Preset Position button (PRESET POSI)**
This button, in combination with the Numeric buttons, is used to move the camera to the desired preset position.

26. **Function button (FUNCTION)**
Pressing this button in combination with another operation button activates a specific function.

27. **History Forward button (HISTORY FWD)**
This button is used to move the camera picture forward on the selected monitor after the HISTORY BACK button has been used.
This button also selects the next page or step of the setup tables on the SETUP MENU.

28. History Back button (HISTORY BACK)
This button is used to display the previous camera picture on the selected monitor. Each operation of this button backs up the camera picture by ones.
This button also selects the previous page or step of the setup tables on the SETUP MENU.

29. Set Up button (SET UP)
This button, in combination with the ALT button, is used to display the SETUP MENU of the Matrix Switcher.

30. Camera Menu button (CAM MENU)
This button, in combination with the ALT button, is used to display the selected Camera's SetUp Menu.

31. Status button (STATUS)
This button toggles the display of the Camera Site Status Table On and Off on the selected monitor.

Note: In combination with the ALT button, this button toggles the display of the System Status Table On and Off on the selected monitor.

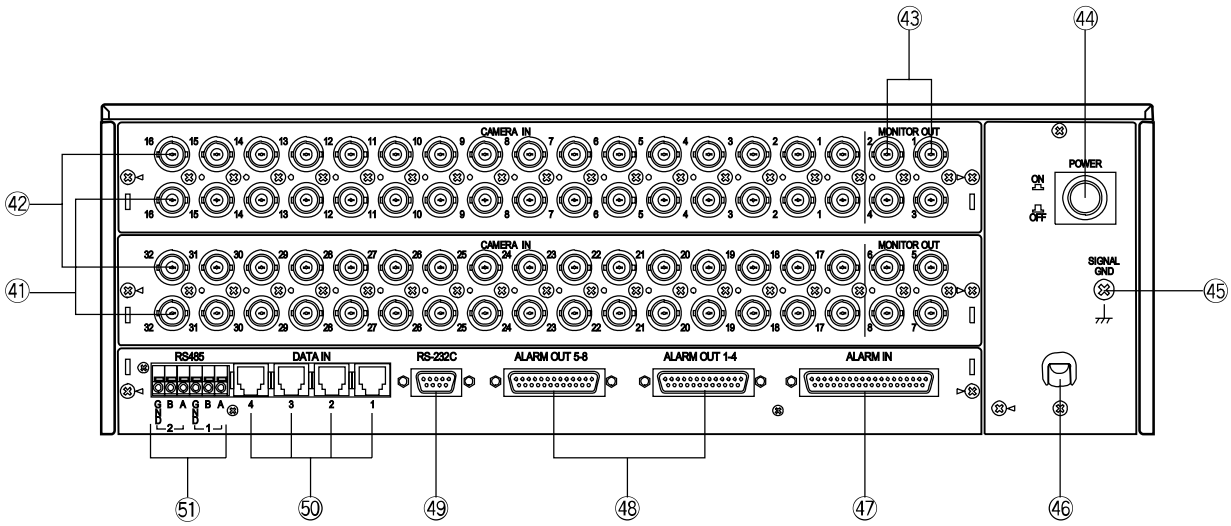
32. Prohibited LED indicator (PROHIBITED)
This indicator lights up for two seconds when the incorrect operator number or password is selected to Log-in.
This indicator also blinks when an attempt is made to gain access to a function that is prohibited by the operator's level.

33. Busy LED indicator (BUSY)
This indicator blinks (or lights up) when you attempt to control a certain monitor (or a camera) that is already used by a higher priority operator, or when the higher priority operator chose the camera or monitor you are currently operating.

Blink:	Monitor
Light up:	Camera

34. Operate LED indicator (OPERATE)
This indicator is lit while the Switcher's power is turned on.

<Rear View>



41. Camera Output Connector (CAMERA OUT)
The video signal connected to the Camera Input Connector (CAMERA IN) is looped through to this connector with an automatic 75Ω termination.

42. Camera Input Connector (CAMERA IN)
This connector accepts either a colour or B/W composite video signal from a camera.

43. Monitor Output Connector (MONITOR OUT)
The video signal selected on the Matrix Switcher is supplied to the Video Monitor from this connector.

44. Power Switch (POWER ON / OFF)
This switch is used to turn the Matrix Switcher power On or Off.

45. Signal Ground Terminal (SIGNAL GND)

46. Power Cord

47. Alarm Input Port (ALARM IN)
This port accepts alarm signals from the associated alarm sensor.
The Input Load Capacitance of each alarm input is required less than 0.01μF.

48. Alarm Control Ports (ALARM OUT 1-4, 5-8)
These ports are used to control the system as follows:

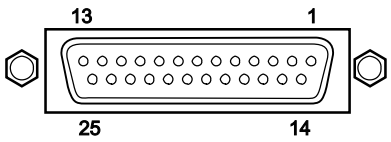
Alarm Output (ALARM OUT):
When the Matrix Switcher receives an alarm from the ALARM IN port or Camera Site, this connector provides the alarm output signal for the Time Lapse VTR.

Reset Output (RESET OUT):
When the Matrix Switcher resets the activated alarm, this connector provides the alarm reset output signal for the Time Lapse VTR.

Recover Input (RECOVER IN):
This connector accepts the alarm recover signals from the Time Lapse VTR.

External Timing Input (EXT TIMING IN):
The camera switching interval (Sequential Dwell Time) can be synchronized with the lapse mode set on the Time Lapse VTR.
EXT TIMING IN 1 controls Monitor 1 output, EXT TIMING IN 2 controls Monitor 2 output, etc.
The camera switching pulse from the Time Lapse VTR is supplied to the Switcher through this connector.

Pin Number	Designation	
	ALARM OUT 1-4	ALARM OUT 5-8
1	ALARM OUT 1	ALARM OUT 5
2	RESET OUT 1	RESET OUT 5
3	RECOVER IN 1	RECOVER IN 5
4	Ground	Ground
5	EXT TIMING IN 1	EXT TIMING IN 5
6	Ground	Ground
7	ALARM OUT 2	ALARM OUT 6
8	RESET OUT 2	RESET OUT 6
9	RECOVER IN 2	RECOVER IN 6
10	Ground	Ground
11	EXT TIMING IN 2	EXT TIMING IN 6
12	Not used	Not used
13	ALARM OUT 3	ALARM OUT 7
14	RESET OUT 3	RESET OUT 7
15	RECOVER IN 3	RECOVER IN 7
16	Ground	Ground
17	EXT TIMING IN 3	EXT TIMING IN 7
18	Ground	Ground
19	ALARM OUT 4	ALARM OUT 8
20	RESET OUT 4	RESET OUT 8
21	RECOVER IN 4	RECOVER IN 8
22	Ground	Ground
23	EXT TIMING IN 4	EXT TIMING IN 8
24	Ground	Ground
25	Ground	Ground

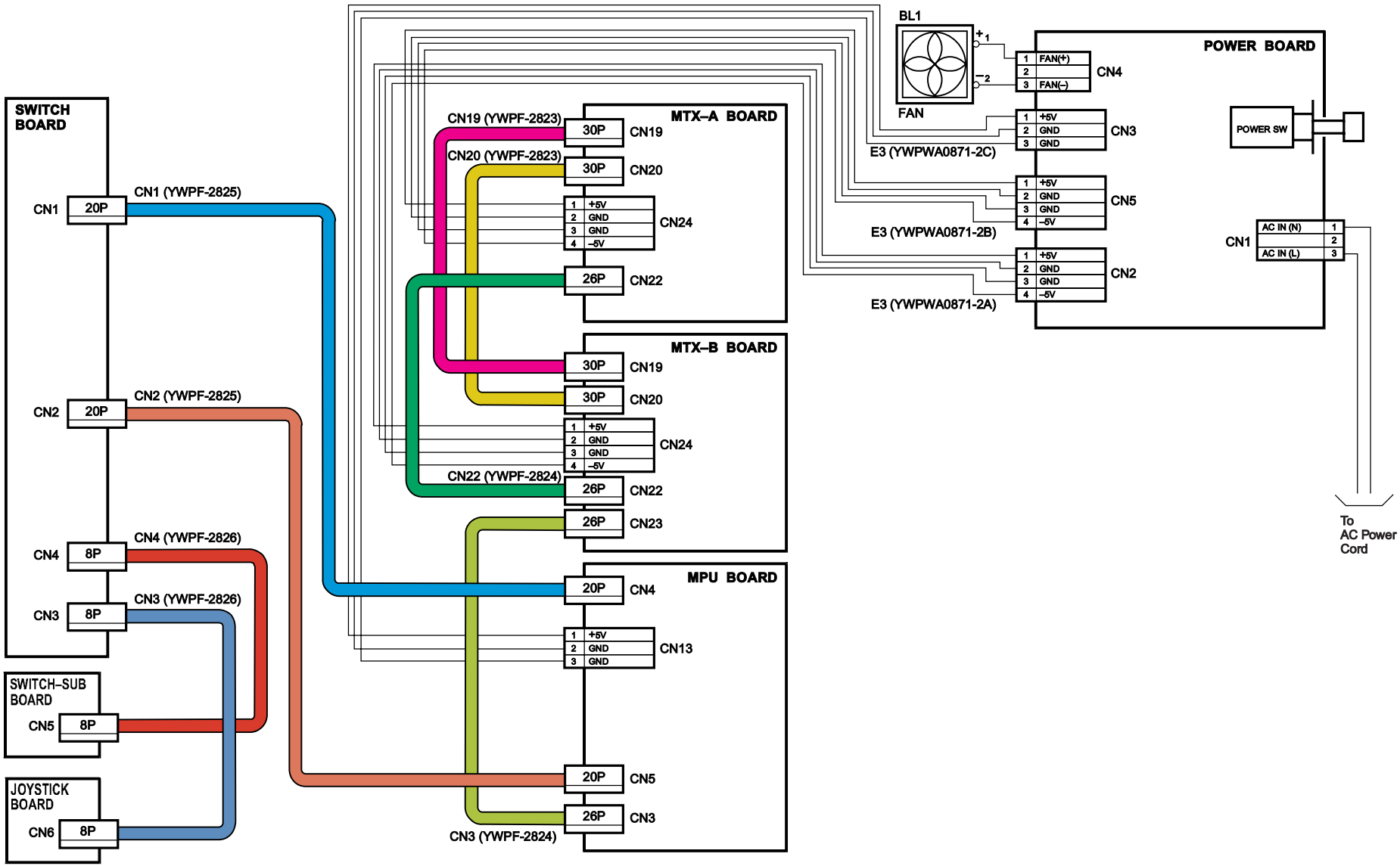


49. RS-232C Port (RS-232C)
This port is used to connect a Personal Computer to control the Switcher remotely.

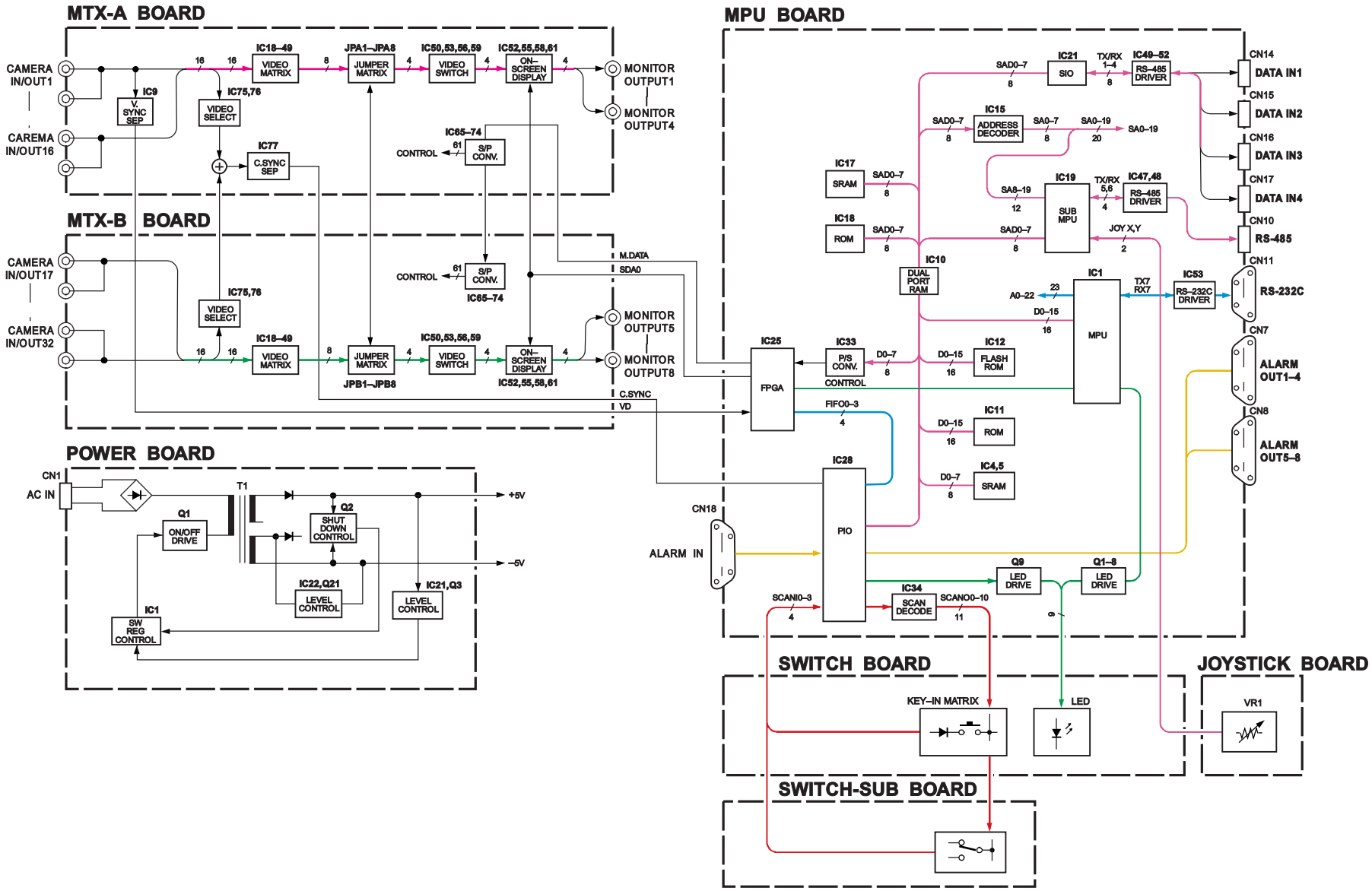
50. Data Ports (DATA IN)
These ports are used to exchange control data with the System Controllers specified for the system.

51. RS485 Terminal (RS485)
This terminal is used to exchange control data with the camera site equipment.

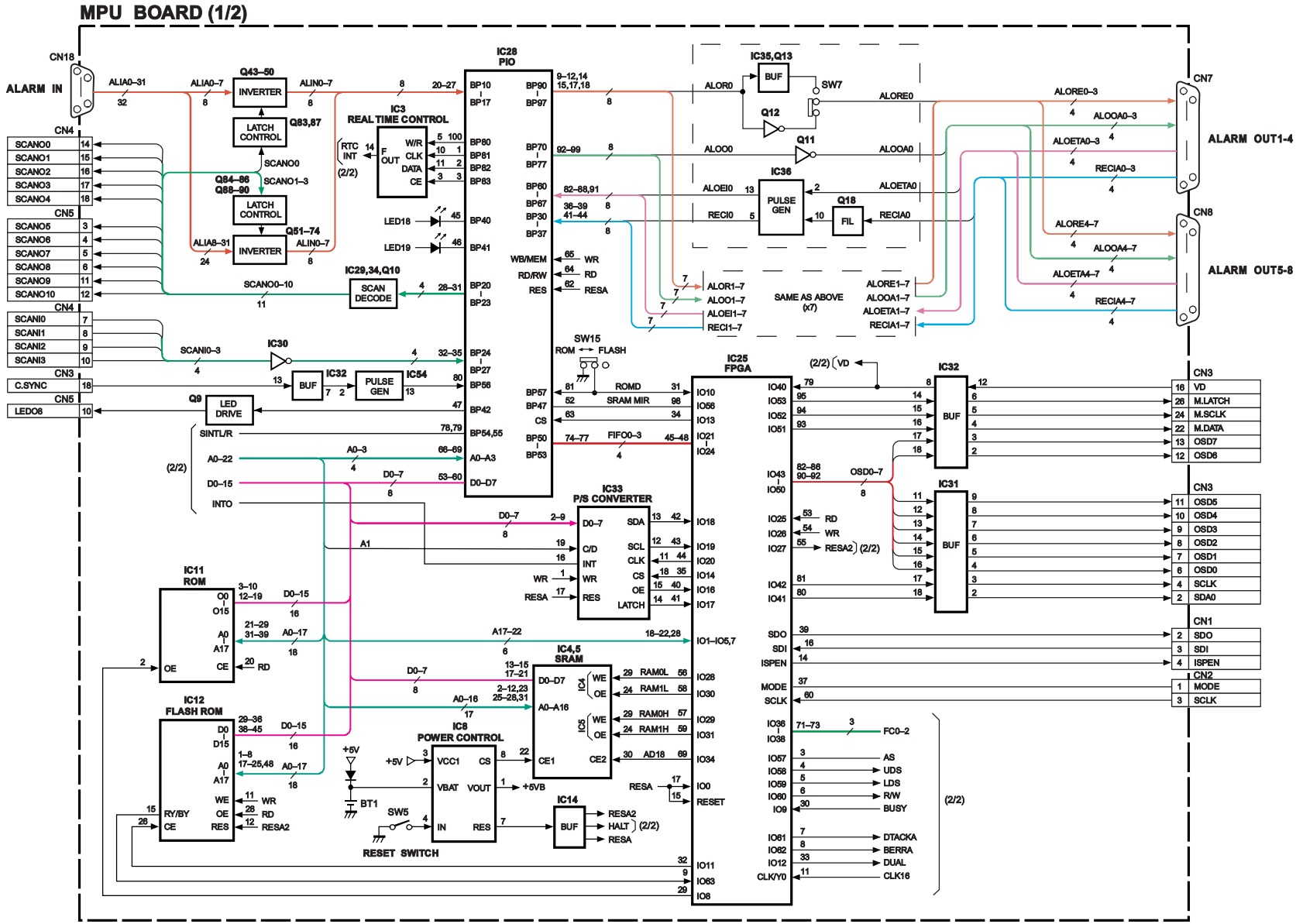
WIRING DIAGRAM



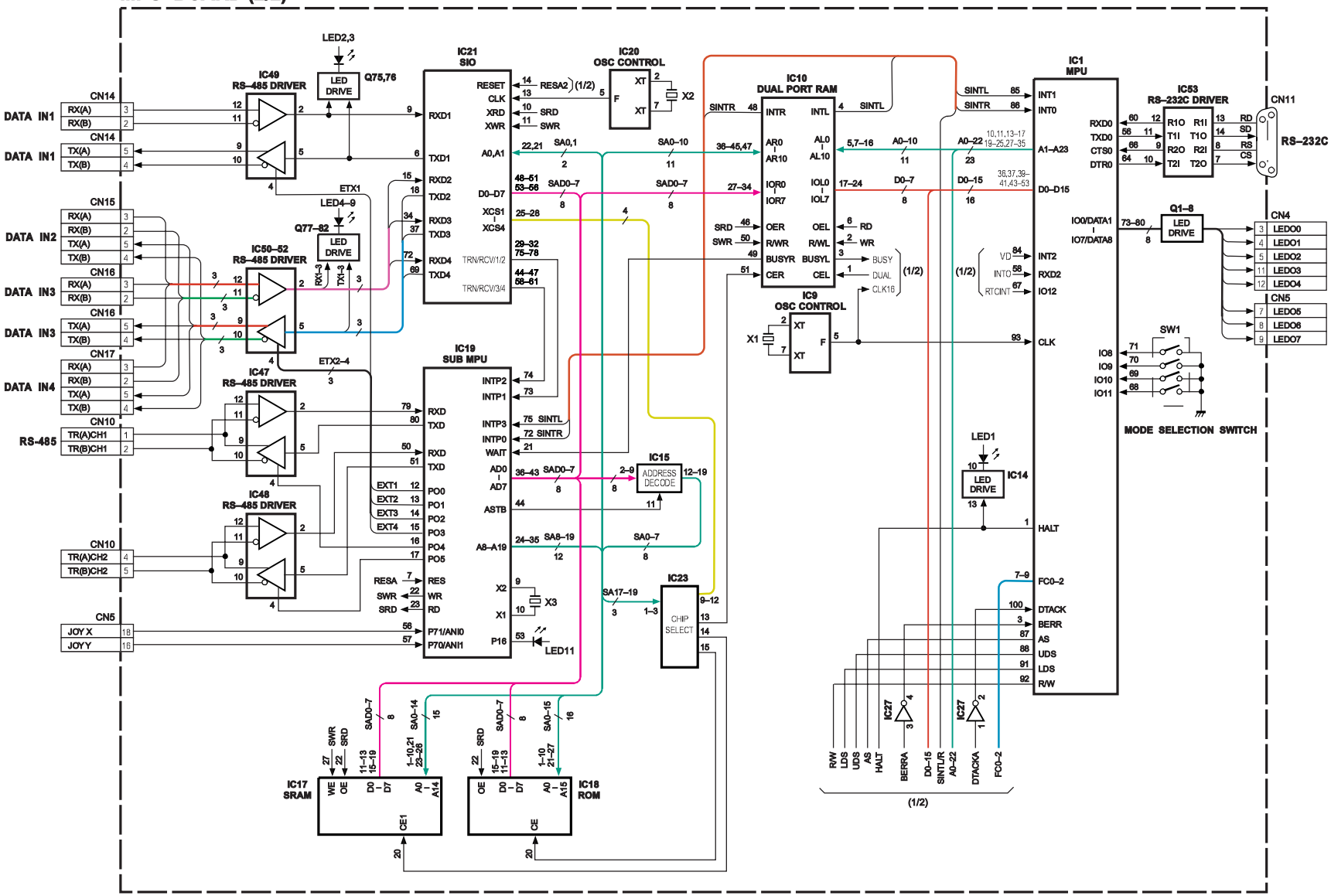
OVERALL BLOCK DIAGRAM



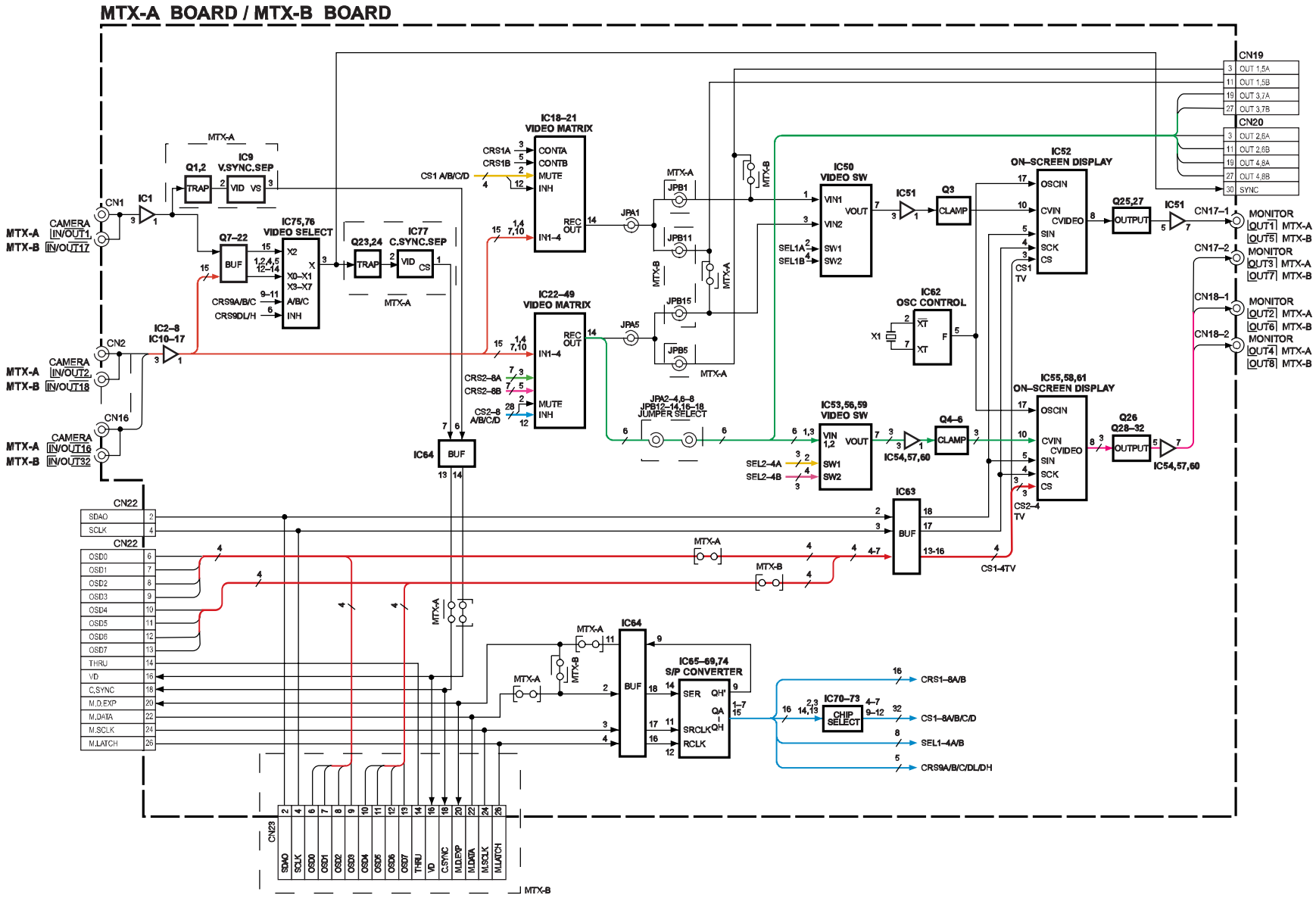
BLOCK DIAGRAM OF MPU BOARD (1/2)



BLOCK DIAGRAM OF MPU BOARD (2/2)

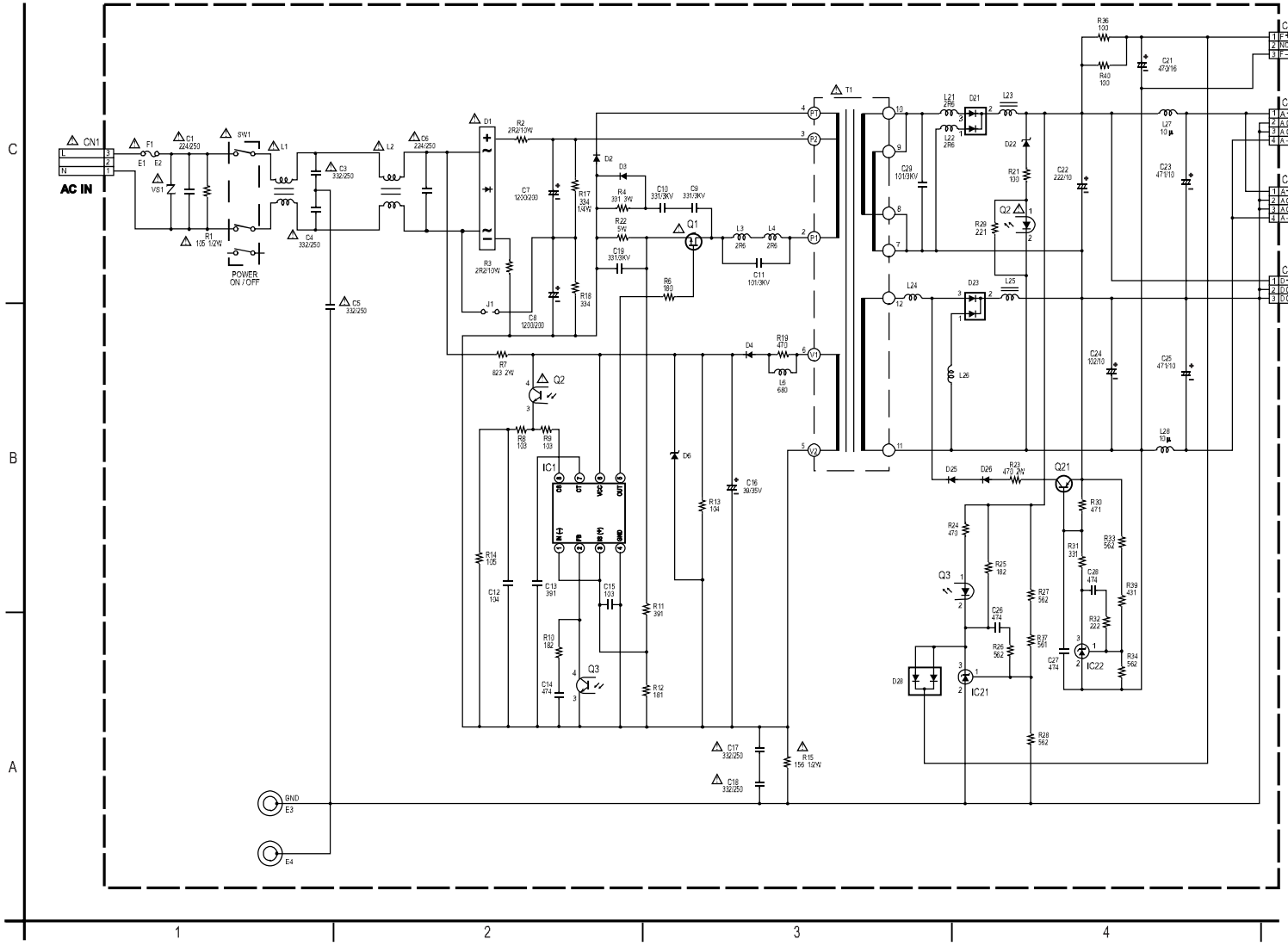


BLOCK DIAGRAM OF MTX-A BOARD / MTX-B BOARD



SCHEMATIC DIAGRAM OF POWER BOARD

POWER BOARD



< INDEX >
POWER BOARD

IC1	B2
IC21	A4
IC22	A4
Q1	C3
Q2	B2,C4
Q3	A2,B4
Q21	B4
D1	C2
D2	C2
D3	C2
D4	B3
D6	B3
D21	C4
D22	C4
D23	B4/C4
D25	B3/B4
D26	B4
D28	A3

Note : The value indicated in the schematic diagram should be read as follows:

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor :

330 ➡ 33 x 10^0 = 33 Ω
561 ➡ 56 x 10^1 = 560 Ω
123 ➡ 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor :

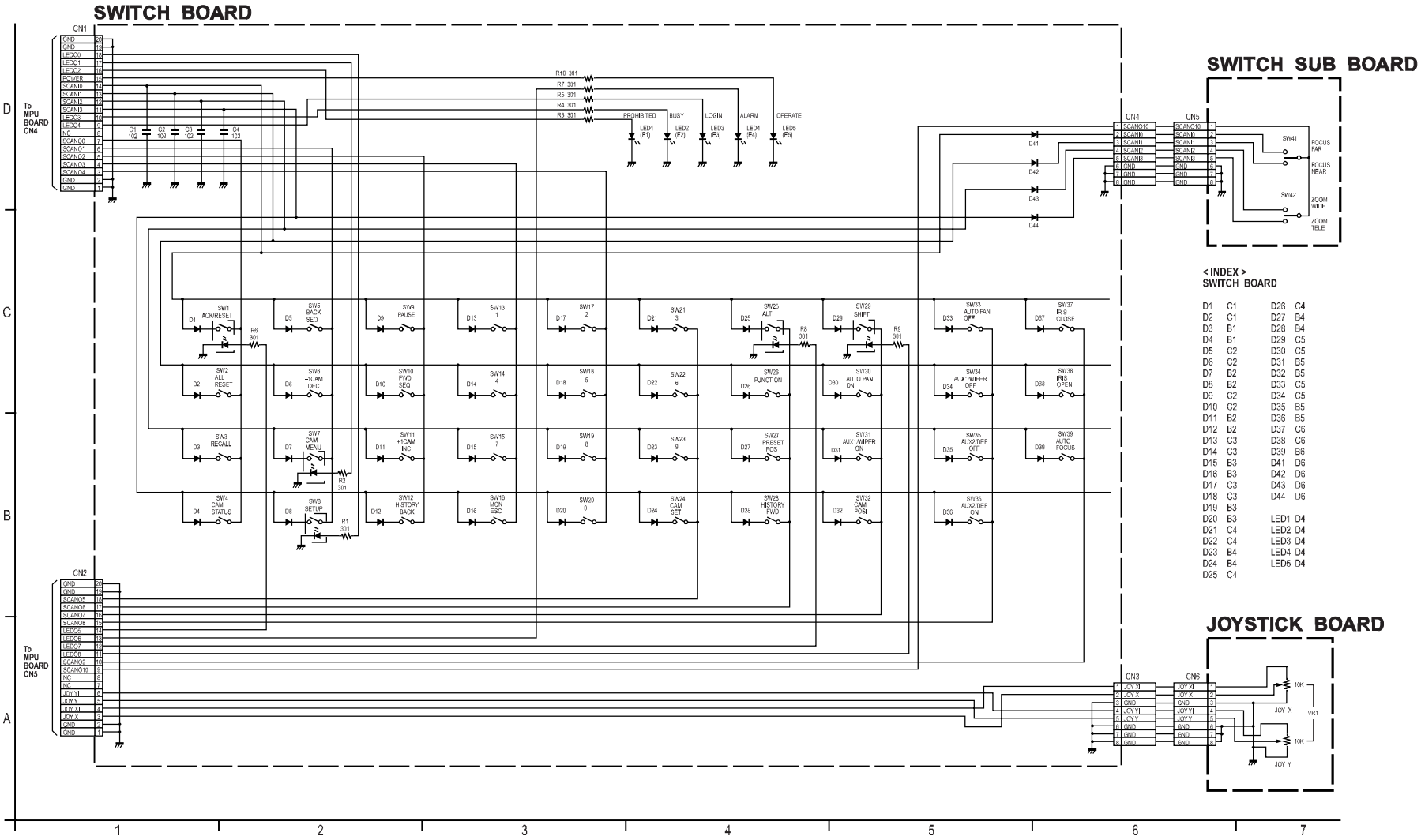
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001 μF
104 ➡ 10 x 10^4 = 100000 pF = 0.1 μF

For Coil :

330 ➡ 33 x 10^0 = 33 μH
561 ➡ 56 x 10^1 = 560 μH
1R8 = 1.8 μH

Important safety notice
Components identified by * ⚠ * mark have special characteristics for safety.
When replacing any of these components, use only manufacturer's specified parts.

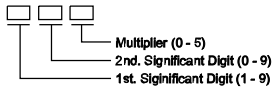
SCHEMATIC DIAGRAM OF SWITCH BOARD / SWITCH SUB BOARD / JOYSTICK BOARD



< INDEX >
SWITCH BOARD

D1	C1	D26	C4
D2	C1	D27	B4
D3	B1	D28	B4
D4	B1	D29	C5
D5	C2	D30	C5
D6	C2	D31	B5
D7	B2	D32	B5
D8	B2	D33	C5
D9	C2	D34	C5
D10	C2	D35	B5
D11	B2	D36	B5
D12	B2	D37	C6
D13	C3	D38	C6
D14	C3	D39	B6
D15	B3	D41	D6
D16	B3	D42	D6
D17	C3	D43	D6
D18	C3	D44	D6
D19	B3		
D20	B3	LED1	D4
D21	C4	LED2	D4
D22	C4	LED3	D4
D23	B4	LED4	D4
D24	B4	LED5	D4
D25	C4		

Note : The value indicated in the schematic diagram should be read as follows:



<Example>

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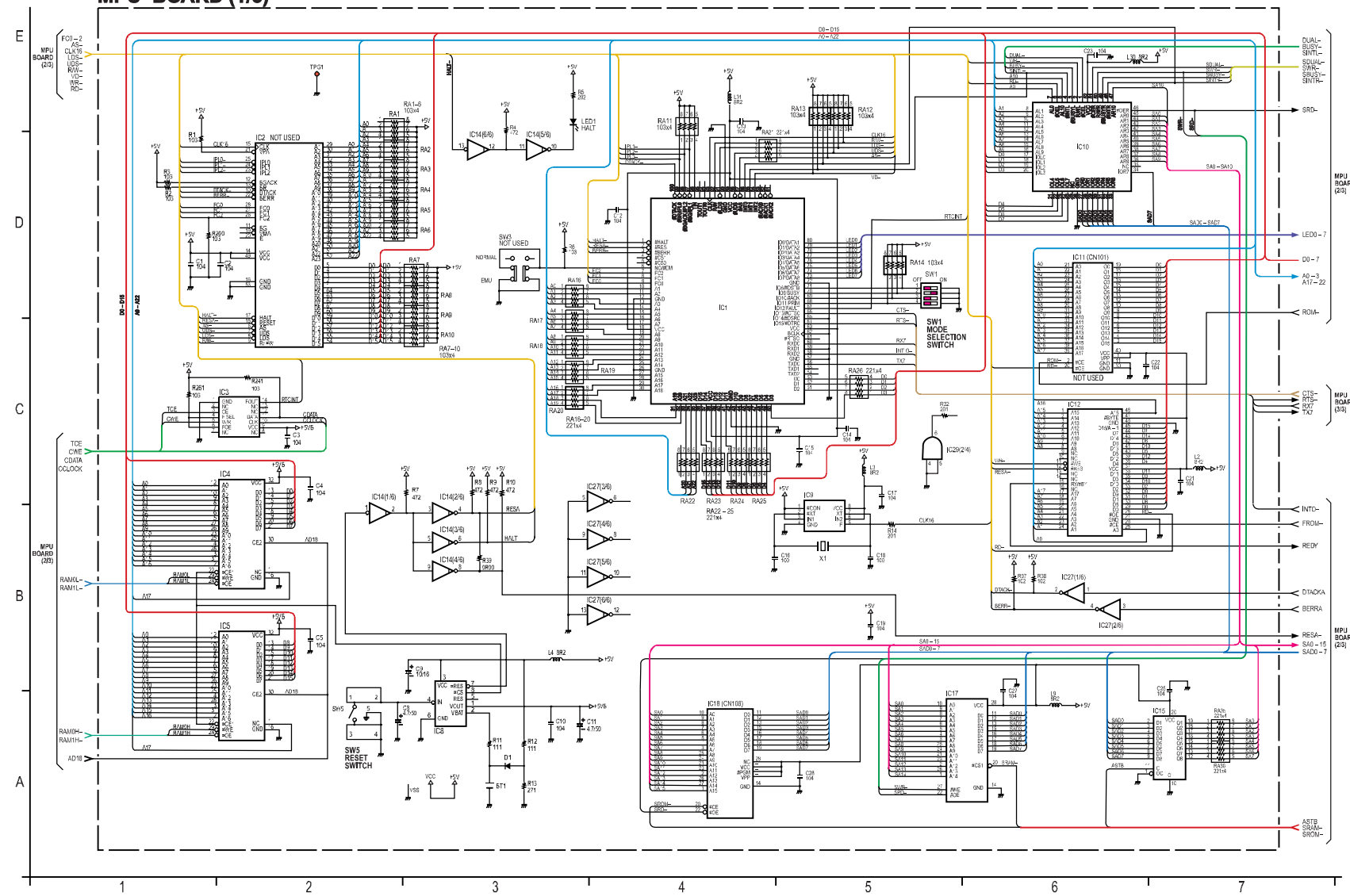
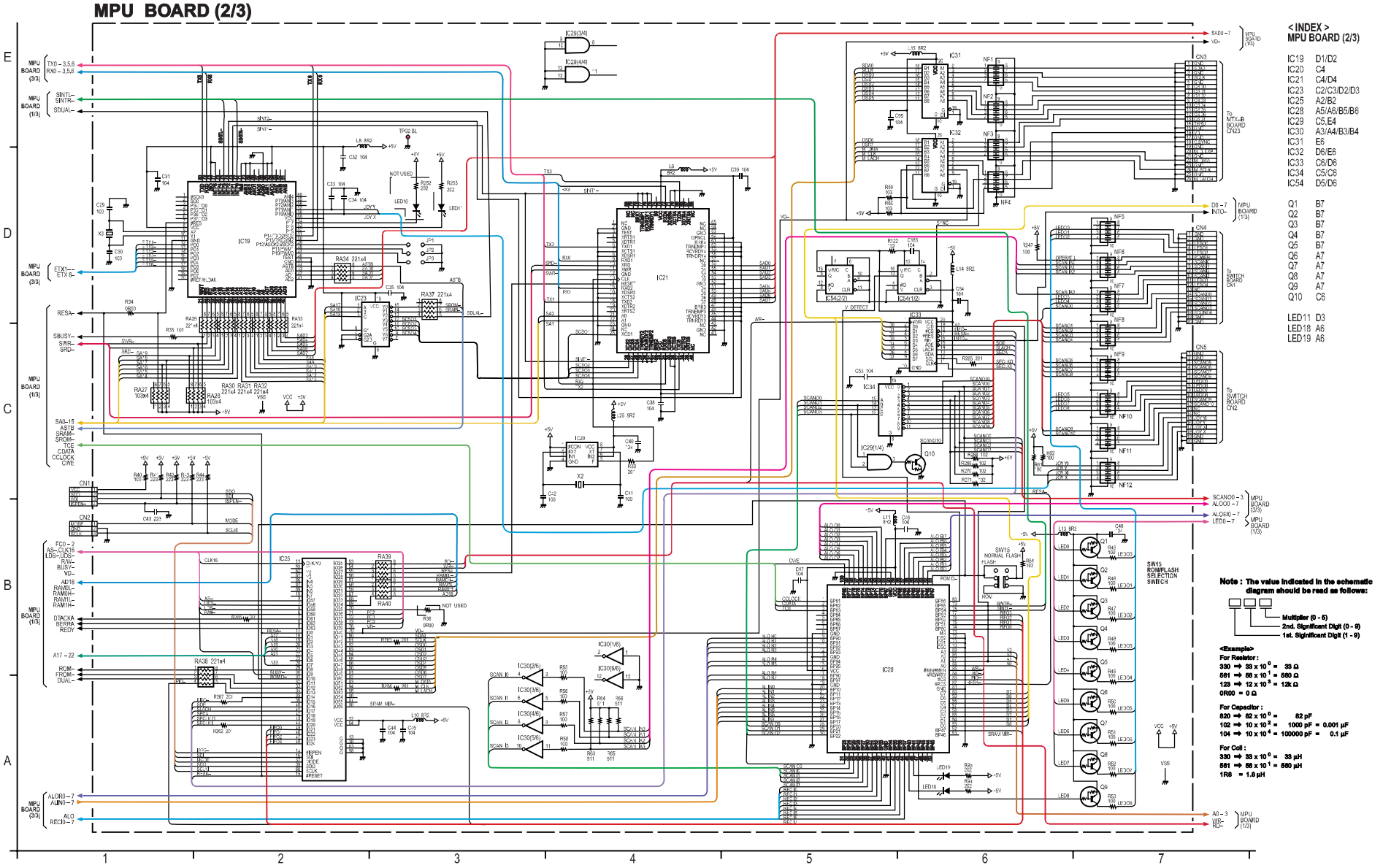
SCHEMATIC DIAGRAM OF MPU BOARD (1/3)



< INDEX >
MPU BOARD (1/3)

IC1	D4
IC3	C2
IC4	C2
IC5	B2
IC8	A3
IC9	C5
IC10	E6
IC11	D6
IC12	C6
IC14	B3
IC15	A7
IC17	A5
IC18	A4
IC27	B6
D1	A3
LED1	E4

SCHEMATIC DIAGRAM OF MPU BOARD (2/3)


MPU BOARD (2/3)
< INDEX >
MPU BOARD (2/3)
IC19 D1/D2
IC20 C4
IC21 C4/D4
IC23 C2/C3/D2/D3
IC25 A2/B2
IC28 A5/A6/B5/B6
IC29 C5,E4
IC30 A3/A4/B3/B4
IC31 E6
IC32 D6/E6
IC33 C6/D6
IC34 C5/C6
IC54 D5/D6
Q1 B7
Q2 B7
Q3 B7
Q4 B7
Q5 B7
Q6 A7
Q7 A7
Q8 A7
Q9 A7
Q10 C6
LED11 D3
LED18 A6
LED19 A6
SW15 ROM/FLASH SELECTION SWITCH
Note : The value indicated in the schematic diagram should be read as follow:
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1st. Significant Digit (1 - 9)
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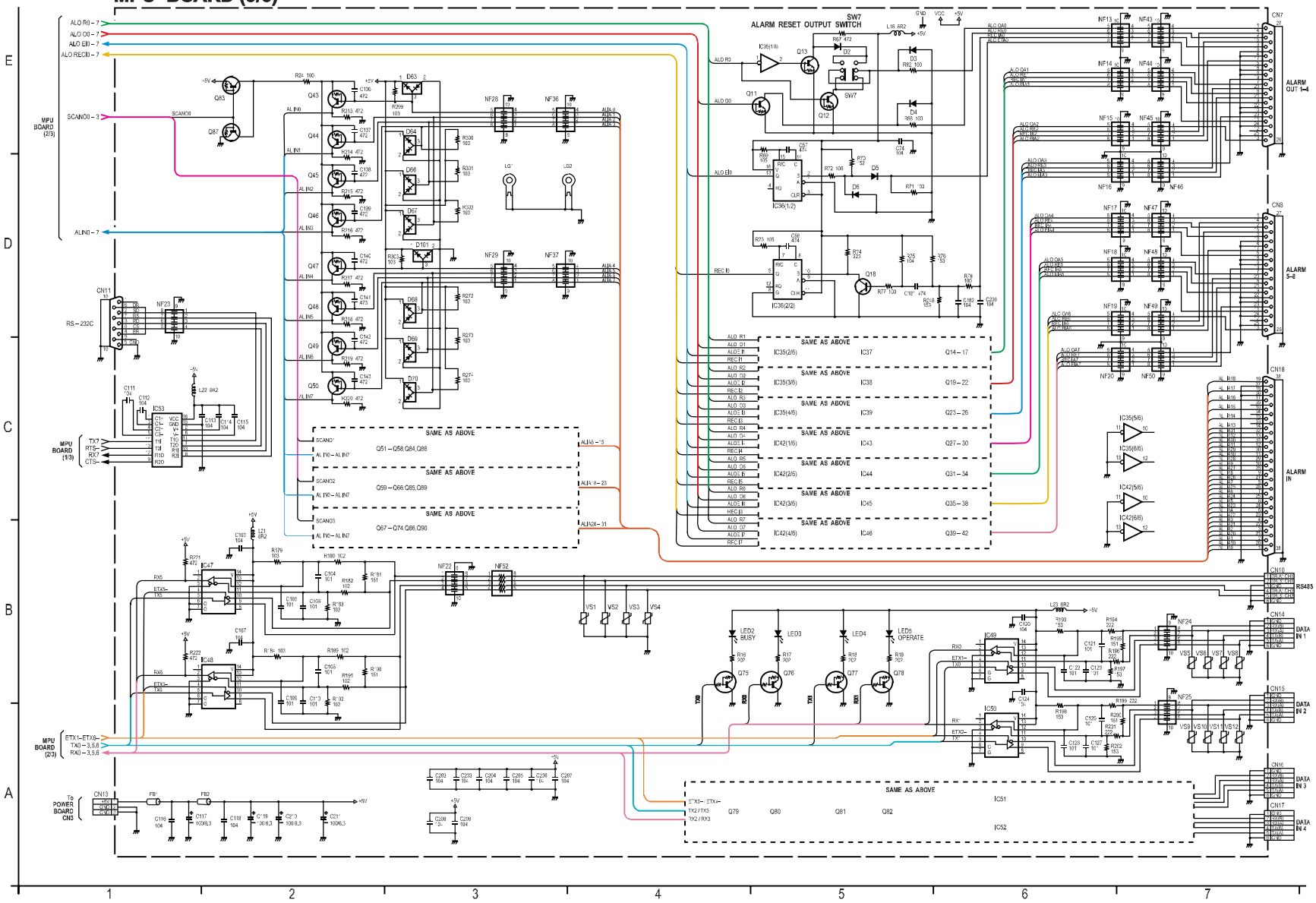
330 → 33 x 10 0 = 33 Ω
561 → 56 x 10 1 = 560 Ω
123 → 12 x 10 3 = 12k Ω
0R00 = 0 Ω
For Capacitor :
820 → 82 x 10 0 = 82 pF
102 → 10 x 10 2 = 1000 pF = 0.001 μF
104 → 10 x 10 4 = 100000 pF = 0.1 μF
For Coil :
330 → 33 x 10 0 = 33 μH
561 → 56 x 10 1 = 560 μH
1R8 = 1.8 μH

SCHEMATIC DIAGRAM OF MPU BOARD (3/3)



< INDEX >
MPU BOARD (3/3)

IC35	E5	Q52	C2
IC36	D5	Q53	C2
IC37	C5	Q54	C2
IC38	C5	Q55	C2
IC39	C5	Q56	C2
IC42	C5	Q57	C2
IC43	C5	Q58	C2
IC44	C5	Q59	C2
IC45	C5	Q60	C2
IC46	B5	Q61	C2
IC47	B2	Q62	C2
IC48	B2	Q63	C2
IC49	B6	Q64	C2
IC50	A6	Q65	C2
IC51	A6	Q66	C2
IC52	A6	Q67	B2
IC53	C1	Q68	B2
		Q69	B2
Q11	E5	Q70	B2
Q12	E5	Q71	B2
Q13	E5	Q72	B2
Q14	C6	Q73	B2
Q15	C6	Q74	B2
Q16	C6	Q75	B4
Q17	C6	Q76	B5
Q18	D5	Q77	B5
Q19	C6	Q78	B5
Q20	C6	Q79	A4
Q21	C6	Q80	A5
Q22	C6	Q81	A5
Q23	C6	Q82	A5
Q24	C6	Q83	E2
Q25	C6	Q84	C3
Q26	C6	Q85	C3
Q27	C6	Q86	B3
Q28	C6	Q87	E2
Q29	C6	Q88	C3
Q30	C6	Q89	C3
Q31	C6	Q90	B3
Q32	C6		
Q33	C6	D2	E5
Q34	C6	D3	E5
Q35	C6	D4	E5
Q36	C6	D5	D5
Q37	C6	D6	D5
Q38	C6	D63	E3
Q39	B6	D64	E3
Q40	B6	D66	D3
Q41	B6	D67	D3
Q42	B6	D68	D3
Q43	E2	D69	C3
Q44	E2	D70	C3
Q45	D2	D101	D3
Q46	D2		
Q47	D2	LED2	B4
Q48	D2	LED3	B5
Q49	D2	LED4	B5
Q50	C2	LED5	B5
Q51	C2		

Note : The value indicated in the schematic diagram should be read as follows:

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

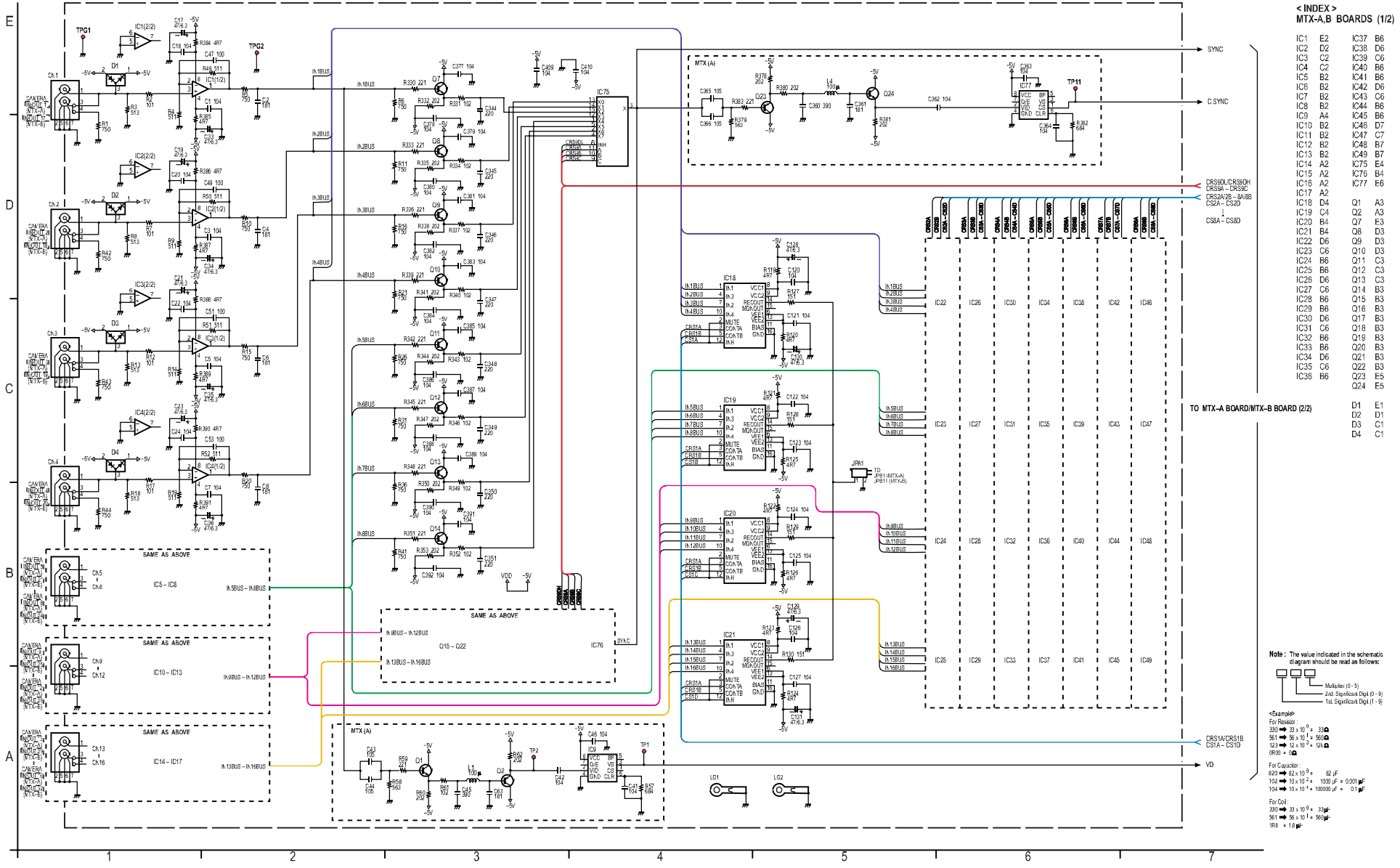
<Example>
For Resistor :
330 ➡ 33 x 10^0 = 33Ω
561 ➡ 56 x 10^1 = 560Ω
123 ➡ 12 x 10^3 = 12kΩ
0R00 = 0Ω

For Capacitor :
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001μF
104 ➡ 10 x 10^4 = 100000 pF = 0.1μF

For Coil :
330 ➡ 33 x 10^0 = 33μH
561 ➡ 56 x 10^1 = 560μH
1R8 = 1.8μH

SCHEMATIC DIAGRAM OF MTX-A BOARD / MTX-B BOARD (1/2)

MTX–A BOARD / MTX–B BOARD (1/2)



< INDEX >
MTX-A,B BOARDS (1/2)

IC1	E2	IC37	B6
IC2	D2	IC38	D6
IC3	C2	IC39	C6
IC4	C2	IC40	B6
IC5	B2	IC41	B6
IC6	B2	IC42	D6
IC7	B2	IC43	C6
IC8	B2	IC44	B6
IC9	A4	IC45	B6
IC10	B2	IC46	D7
IC11	B2	IC47	C7
IC12	B2	IC48	B7
IC13	B2	IC49	B7
IC14	A2	IC75	E4
IC15	A2	IC76	B4
IC16	A2	IC77	E6
IC17	A2		
IC18	D4	Q1	A3
IC19	C4	Q2	A3
IC20	B4	Q7	E3
IC21	B4	Q8	D3
IC22	D6	Q9	D3
IC23	C6	Q10	D3
IC24	B6	Q11	C3
IC25	B6	Q12	C3
IC26	D6	Q13	C3
IC27	C6	Q14	B3
IC28	B6	Q15	B3
IC29	B6	Q16	B3
IC30	D6	Q17	B3
IC31	C6	Q18	B3
IC32	B6	Q19	B3
IC33	B6	Q20	B3
IC34	D6	Q21	B3
IC35	C6	Q22	B3
IC36	B6	Q23	E5
		Q24	E5
		D1	E1
		D2	D1
		D3	C1
		D4	C1

Note : The value indicated in the schematic diagram should be read as follows:

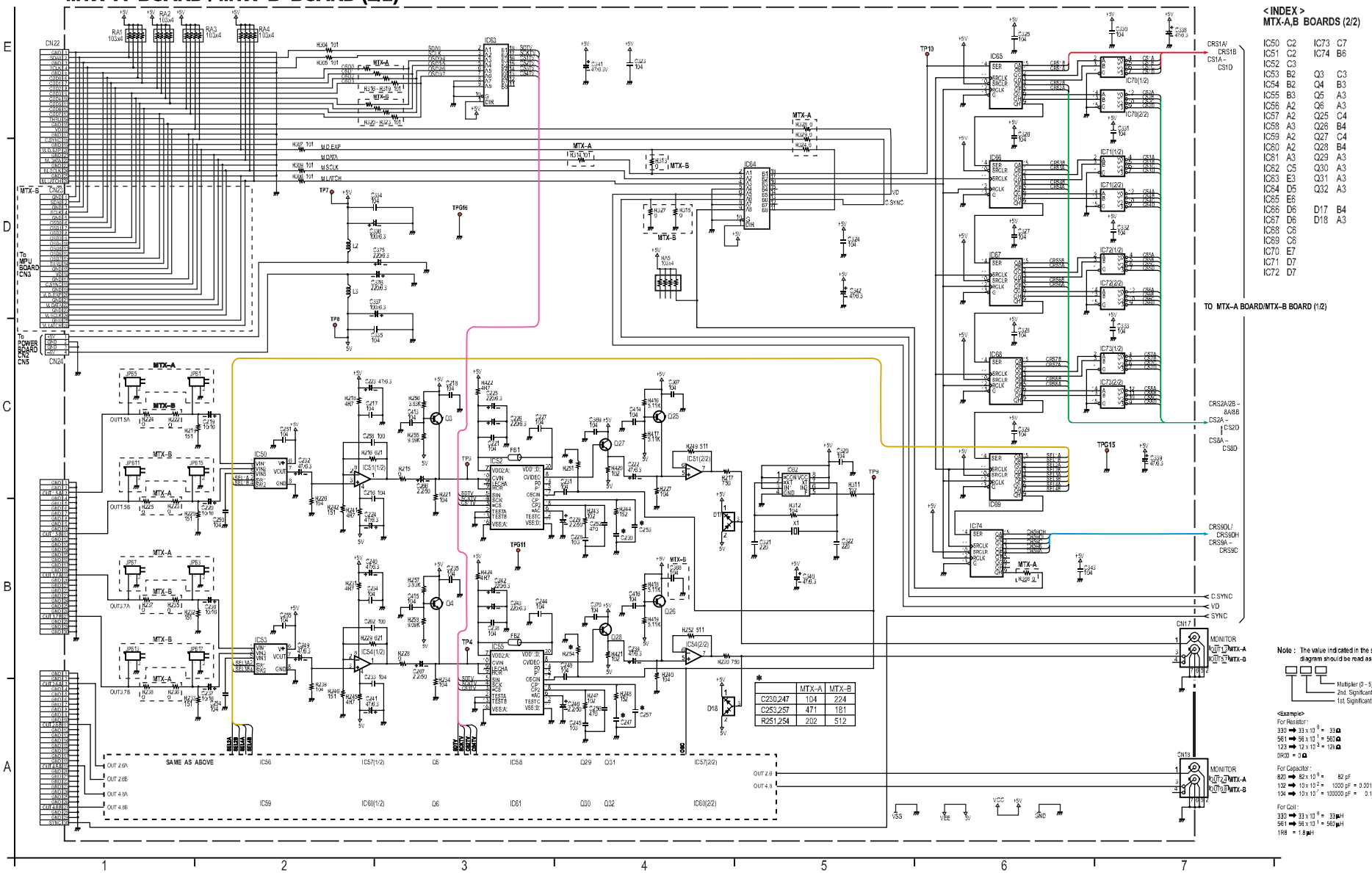
<Example>
For Resistor :
330 ➡ 33 x 10^0 = 33Ω
561 ➡ 56 x 10^1 = 560Ω
123 ➡ 12 x 10^2 = 12kΩ
0R00 = 0Ω

For Capacitor :
820 ➡ 82 x 10^{-2} = 82 pF
102 ➡ 10 x 10^{-2} = 1000 pF = 0.001 μF
104 ➡ 10 x 10^{-4} = 100000 pF = 0.1 μF

For Coil :
330 ➡ 33 x 10^{-1} = 33μH
561 ➡ 56 x 10^{-1} = 560μH
1R8 = 1.8 μH

SCHEMATIC DIAGRAM OF MTX-A BOARD / MTX-B BOARD (2/2)

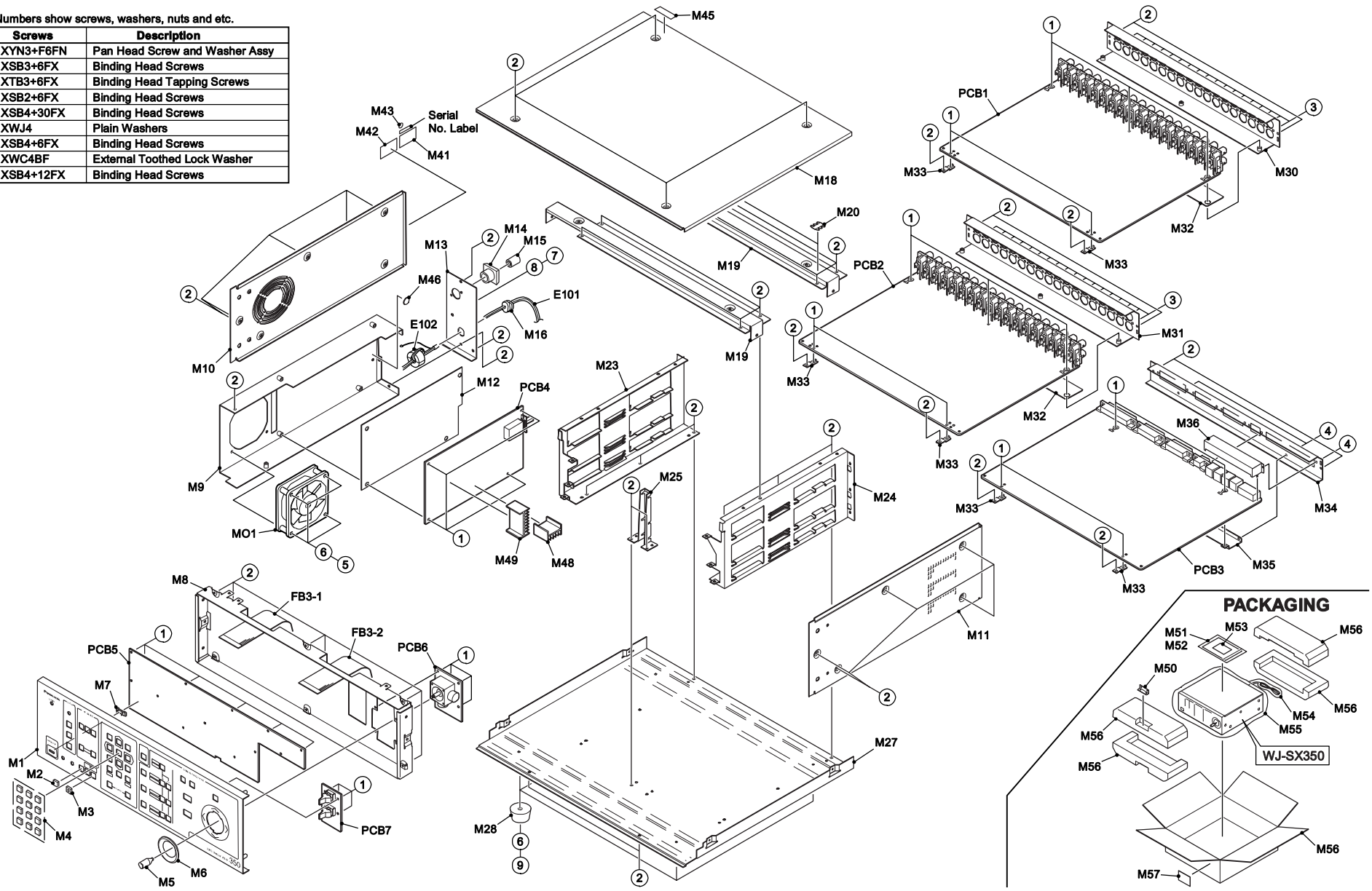
MTX–A BOARD / MTX–B BOARD (2/2)



EXPLODED VIEW

◯Numbers show screws, washers, nuts and etc.

No.	Screws	Description
①	XYN3+F6FN	Pan Head Screw and Washer Assy
②	XSB3+6FX	Binding Head Screws
③	XTB3+6FX	Binding Head Tapping Screws
④	XSB2+6FX	Binding Head Screws
⑤	XSB4+30FX	Binding Head Screws
⑥	XWJ4	Plain Washers
⑦	XSB4+6FX	Binding Head Screws
⑧	XWC4BF	External Toothed Lock Washer
⑨	XSB4+12FX	Binding Head Screws



REPLACEMENT PARTS LIST

Important Notice

1. Components identified by " ⚠ " mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited (No longer available after discontinuing product).

REF. NO.	PART NO.	DESCRIPTION
	MISCELLANEOUS	
MO1	YWZ4P0003	Fan Motor
FB1-1(CN9)	YWPF-2823	Flat Cable for MTX-A Board CN19 and MTX-B Board CN19
FB1-2(CN20)	YWPF-2823	Flat Cable for MTX-A Board CN20 and MTX-B Board CN20
FB2-1(CN22)	YWPF-2824	Flat Cable for MTX-A Board CN22 and MTX-B Board CN22
FB2-2(CN3)	YWPF-2824	Flat Cable for MTX-B Board CN23 and MPU Board CN3
FB3-1(CN1)	YWPF-2825	Flat Cabl for Switch Board CN1 and MPU Board CN4
FB3-2(CN2)	YWPF-2825	Flat Cable for Switch Board CN2 and MPU Board CN5
FB4-1(CN4)	YWPF-2826	Flat Cable for Switch Board CN4 and Switch Sub Board CN5
FB4-2(CN3)	YWPF-2826	Flat Cable for Switch Board CN3 and Joystick Board CN6
E1	YWPWA0871-2A	Wire Assy for Power Board CN2 and MTX-B Board CN24
E2	YWPWA0871-2B	Wire Assy for Powe Board CN5 MTX-A Board CN24
E3	YWPWA0871-2C	Wire Assy for Power Board CN3 and MPU Board CN13
E101 ⚠	YWH6PWA0891	AC Power Cord
E102	YWE5BPTRCC20	Core
M1	YWM990507B03	Front Panel
M2	YWV6JA0107A4	Button
M3	YWV6JA0106A4	Button
M4	YWV9AA2517AN	Key Assy
M5	YWV5RA0318A4	Knob
M6	YWV5WA1631A3	Panel
M7	YWA2EC0027A3	Guide
M8	YWM990507B02	Front Sub Chassis
M9	YWM990507B10	Power Supply Chassis
M10	YWM990507B04	Left Side Cover
M11	YWM990507B05	Right Side Cover
M12 ⚠	YWM990507K01	Power Supply Insulator Sheet
M13	YWM990507B14	Power Supply Side Plate
M14	YWA5DB0020A3	Ornament
M15	YWA5RG0141A3	Knob
M16 ⚠	YWSR5N4	Cord Bushing
M18	YWM990507B12	Upper Cover
M19	YWM990507B11	Support
M20	YWZ9M412148	Seald Plate
M23	YWM990507B08	Left Side Bracket
M24	YWM990507B09	Right Side Bracket
M25	YWM990507B15	Bracket
M27	YWM990507B01	Main Chassis
M28	YWX85-WB01	Rubber Foot
M30	YW2-14223	Mounting Angle A for Connector
M31	YW2-14224	Mounting Angle B for Connector
M32	YWM990507K02	Connector Insulator Sheet
M33	YWM990507B17	Mounting Bracket
M34	YWM990507B07	Mounting Angle for MPU Board
M35	YWM990507B14	Mounting Sub Angle for MPU Board
M36	YWM990507B14	Connector Cover
M41 ⚠	YWM990508H01	Main Label
M42 ⚠	YWV7MA0473A4	Safety Label
M43 ⚠	————	SEMCO Label
M45 ⚠	YFV7MB0099A4	Safety Label
M46 ⚠	YWA7SA0689A4	Earth Label
	MTX-A BOARD	
PCB1 (RTL)	JSX35PRZ2BC	Printed Circuit Board Assy
IC1-8	YWMC14577CF	IC
IC9	YWLM1881M	IC
IC10-17	YWMC14577CF	IC
IC18-49	YWA65CX1558L	IC
IC50	YWNJM2235M	IC
IC51	YWMC14577CF	IC
IC52	YWA8UM35055F	IC
IC53	YWNJM2235M	IC
IC54	YWMC14577CF	IC
IC55	YWA8UM35055F	IC
IC56	YWNJM2235M	IC
IC57	YWMC14577CF	IC
IC58	YWA8UM35055F	IC
IC59	YWNJM2235M	IC
IC60	YWMC14577CF	IC
IC61	YWA8UM35055F	IC
IC62	YWNJU6321PE	IC
IC63,64	YWA5HC0245F	IC
IC65-69	YWA5HC0595F	IC

REF. NO.	PART NO.	DESCRIPTION	
IC70-73	YWA5HC0139F	IC	
IC74	YWA5HC0595F	IC	
IC75,76	YWA5HC4051F	IC	
IC77	YWLM1881M	IC	
Q1	2SC2712GR	Transistor	
Q2	YWB0A1162GR	Transistor	
Q3-22	2SC2712GR	Transistor	
Q23	YWB0A1162GR	Transistor	
Q24-32	2SC2712GR	Transistor	
D1-20	YWDAN217	Diode	
RA1-5	YWDXARQJF103	Block Resistor	
R1	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R2	YWDXCTSJD101	Carbon	100 ohms 1/10W
R3	YWDXCTSJF513	Carbon	51K ohms 1/10W
R4	YWDXCTSJD511	Carbon	510 ohms 1/10W
R5	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R6	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R7	YWDXCTSJD101	Carbon	100 ohms 1/10W
R8	YWDXCTSJF513	Carbon	51K ohms 1/10W
R9	YWDXCTSJD511	Carbon	510 ohms 1/10W
R10,11	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R12	YWDXCTSJD101	Carbon	100 ohms 1/10W
R13	YWDXCTSJF513	Carbon	51K ohms 1/10W
R14	YWDXCTSJD511	Carbon	510 ohms 1/10W
R15,16	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R17	YWDXCTSJD101	Carbon	100 ohms 1/10W
R18	YWDXCTSJF513	Carbon	51K ohms 1/10W
R19	YWDXCTSJD511	Carbon	510 ohms 1/10W
R20,21	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R22	YWDXCTSJD101	Carbon	100 ohms 1/10W
R23	YWDXCTSJF513	Carbon	51K ohms 1/10W
R24	YWDXCTSJD511	Carbon	510 ohms 1/10W
R25,26	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R27	YWDXCTSJD101	Carbon	100 ohms 1/10W
R28	YWDXCTSJF513	Carbon	51K ohms 1/10W
R29	YWDXCTSJD511	Carbon	510 ohms 1/10W
R30,31	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R32	YWDXCTSJD101	Carbon	100 ohms 1/10W
R33	YWDXCTSJF513	Carbon	51K ohms 1/10W
R34	YWDXCTSJD511	Carbon	510 ohms 1/10W
R35,36	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R37	YWDXCTSJD101	Carbon	100 ohms 1/10W
R38	YWDXCTSJF513	Carbon	51K ohms 1/10W
R39	YWDXCTSJD511	Carbon	510 ohms 1/10W
R40-48	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R49,50	YWDXCTSJD511	Carbon	510 ohms 1/10W
R51-56	YWDXCTSJD511	Carbon	510 ohms 1/10W
R57	YWDXCTSJG684	Carbon	680K ohms 1/10W
R58	YWDXCTSJF563	Carbon	56K ohms 1/10W
R59	YWDXCTSJD221	Carbon	220 ohms 1/10W
R60	YWDXCTSJE202	Carbon	2K ohms 1/10W
R61	YWDXCTSJE102	Carbon	1K ohms 1/10W
R62	YWDXCTSJE202	Carbon	2K ohms 1/10W
R63	YWDXCTSJD101	Carbon	100 ohms 1/10W
R64	YWDXCTSJF513	Carbon	51K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R65	YWDXCTSJD511	Carbon	510 ohms 1/10W
R66,67	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R68	YWDXCTSJD101	Carbon	100 ohms 1/10W
R69	YWDXCTSJF513	Carbon	51K ohms 1/10W
R70	YWDXCTSJD511	Carbon	510 ohms 1/10W
R71,72	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R73	YWDXCTSJD101	Carbon	100 ohms 1/10W
R74	YWDXCTSJF513	Carbon	51K ohms 1/10W
R75	YWDXCTSJD511	Carbon	510 ohms 1/10W
R76,77	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R78	YWDXCTSJD101	Carbon	100 ohms 1/10W
R79	YWDXCTSJF513	Carbon	51K ohms 1/10W
R80	YWDXCTSJD511	Carbon	510 ohms 1/10W
R81,82	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R83	YWDXCTSJD101	Carbon	100 ohms 1/10W
R84	YWDXCTSJF513	Carbon	51K ohms 1/10W
R85	YWDXCTSJD511	Carbon	510 ohms 1/10W
R86,87	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R88	YWDXCTSJD101	Carbon	100 ohms 1/10W
R89	YWDXCTSJF513	Carbon	51K ohms 1/10W
R90	YWDXCTSJD511	Carbon	510 ohms 1/10W
R91,92	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R93	YWDXCTSJD101	Carbon	100 ohms 1/10W
R94	YWDXCTSJF513	Carbon	51K ohms 1/10W
R95	YWDXCTSJD511	Carbon	510 ohms 1/10W
R96,97	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R98	YWDXCTSJD101	Carbon	100 ohms 1/10W
R99	YWDXCTSJF513	Carbon	51K ohms 1/10W
R100	YWDXCTSJD511	Carbon	510 ohms 1/10W
R101-110	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R111-118	YWDXCTSJD511	Carbon	510 ohms 1/10W
R119-126	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R127-130	YWDXCTSJD151	Carbon	150 ohms 1/10W
R131-138	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R139-142	YWDXCTSJD151	Carbon	150 ohms 1/10W
R143-150	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R151-154	YWDXCTSJD151	Carbon	150 ohms 1/10W
R155-162	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R163-166	YWDXCTSJD151	Carbon	150 ohms 1/10W
R167-174	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R175-178	YWDXCTSJD151	Carbon	150 ohms 1/10W
R179-186	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R187-190	YWDXCTSJD151	Carbon	150 ohms 1/10W
R191-198	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R199-202	YWDXCTSJD151	Carbon	150 ohms 1/10W
R203-210	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R211-214	YWDXCTSJD151	Carbon	150 ohms 1/10W
R215	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R216	YWDXCTSJD621	Carbon	620 ohms 1/10W
R217	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R218	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R219,220	YWDXCTSJD151	Carbon	150 ohms 1/10W
R221	YWDXCTSJG104	Carbon	100K ohms 1/10W
R223	YWDXCTSJA0R0	Carbon	0 ohm 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R225	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R226,227	YWDXCTSJG104	Carbon	100K ohms 1/10W
R228	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R229	YWDXCTSJD621	Carbon	620 ohms 1/10W
R230	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R231	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R232,233	YWDXCTSJD151	Carbon	150 ohms 1/10W
R234	YWDXCTSJG104	Carbon	100K ohms 1/10W
R236	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R238	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R239,240	YWDXCTSJG104	Carbon	100K ohms 1/10W
R241	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R242	YWDXCTSJD151	Carbon	150 ohms 1/10W
R243	YWDXCTSJE102	Carbon	1 K ohms 1/10W
R244	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R245	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R246	YWDXCTSJD151	Carbon	150 ohms 1/10W
R247	YWDXCTSJE102	Carbon	1K ohms 1/10W
R248	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R249	YWDXCTSJD511	Carbon	510 ohms 1/10W
R251	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R252	YWDXCTSJD511	Carbon	510 ohms 1/10W
R254	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R255	YWDXMTSE9091	Metal	9.09K ohms
R256,257	YWDXMTSE3831	Metal	3.81K ohms
R258	YWDXMTSE9091	Metal	9.09K ohms
R259	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R260	YWDXCTSJD621	Carbon	620 ohms 1/10W
R261	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R262	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R263,264	YWDXCTSJD151	Carbon	150 ohms 1/10W
R265	YWDXCTSJG104	Carbon	100K ohms 1/10W
R267	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R269	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R270,271	YWDXCTSJG104	Carbon	100K ohms 1/10W
R272	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R273	YWDXCTSJD621	Carbon	620 ohms 1/10W
R274	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R275	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R276,277	YWDXCTSJD151	Carbon	150 ohms 1/10W
R278	YWDXCTSJG104	Carbon	100K ohms 1/10W
R280	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R282	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R283,284	YWDXCTSJG104	Carbon	100K ohms 1/10W
R285	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R286	YWDXCTSJD151	Carbon	150 ohms 1/10W
R287	YWDXCTSJE102	Carbon	1K ohms 1/10W
R288	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R289	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R290	YWDXCTSJD151	Carbon	150 ohms 1/10W
R291	YWDXCTSJE102	Carbon	1K ohms 1/10W
R292	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R293	YWDXCTSJD511	Carbon	510 ohms 1/10W
R295	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R296	YWDXCTSJD511	Carbon	510 ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R298	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R299	YWDXMTSE3831	Metal	3.83K ohms
R300	YWDXMTSE9091	Metal	9.09K ohms
R301	YWDXMTSE3831	Metal	3.83K ohms
R302	YWDXMTSE9091	Metal	9.09K ohms
R304-307	YWDXCTSJD101	Carbon	100 ohms 1/10W
R308	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R309	YWDXCTSJD101	Carbon	100 ohms 1/10W
R311	YWDXCTSJE102	Carbon	1K ohms 1/10W
R312	YWDXCTSJG104	Carbon	100K ohms 1/10W
R314	YWDXCTSJD101	Carbon	100 ohm 1/10W
R316-319	YWDXCTSJD101	Carbon	100 ohm 1/10W
R324	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R328,329	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R330	YWDXCTSJD221	Carbon	220 ohms 1/10W
R331	YWDXCTSJE102	Carbon	1K ohms 1/10W
R332	YWDXCTSJE202	Carbon	2K ohms 1/10W
R333	YWDXCTSJD221	Carbon	220 ohms 1/10W
R334	YWDXCTSJE102	Carbon	1K ohms 1/10W
R335	YWDXCTSJE202	Carbon	2K ohms 1/10W
R336	YWDXCTSJD221	Carbon	220 ohms 1/10W
R337	YWDXCTSJE102	Carbon	1K ohms 1/10W
R338	YWDXCTSJE202	Carbon	2K ohms 1/10W
R339	YWDXCTSJD221	Carbon	220 ohms 1/10W
R340	YWDXCTSJE102	Carbon	1K ohms 1/10W
R341	YWDXCTSJE202	Carbon	2K ohms 1/10W
R342	YWDXCTSJD221	Carbon	220 ohms 1/10W
R343	YWDXCTSJE102	Carbon	1K ohms 1/10W
R344	YWDXCTSJE202	Carbon	2K ohms 1/10W
R345	YWDXCTSJD221	Carbon	220 ohms 1/10W
R346	YWDXCTSJE102	Carbon	1K ohms 1/10W
R347	YWDXCTSJE202	Carbon	2K ohms 1/10W
R348	YWDXCTSJD221	Carbon	220 ohms 1/10W
R349	YWDXCTSJE102	Carbon	1K ohms 1/10W
R350	YWDXCTSJE202	Carbon	2K ohms 1/10W
R351	YWDXCTSJD221	Carbon	220 ohms 1/10W
R352	YWDXCTSJE102	Carbon	1K ohms 1/10W
R353	YWDXCTSJE202	Carbon	2K ohms 1/10W
R354	YWDXCTSJD221	Carbon	220 ohms 1/10W
R355	YWDXCTSJE102	Carbon	1K ohms 1/10W
R356	YWDXCTSJE202	Carbon	2K ohms 1/10W
R357	YWDXCTSJD221	Carbon	220 ohms 1/10W
R358	YWDXCTSJE102	Carbon	1K ohms 1/10W
R359	YWDXCTSJE202	Carbon	2K ohms 1/10W
R360	YWDXCTSJD221	Carbon	220 ohms 1/10W
R361	YWDXCTSJE102	Carbon	1K ohms 1/10W
R362	YWDXCTSJE202	Carbon	2K ohms 1/10W
R363	YWDXCTSJD221	Carbon	220 ohms 1/10W
R364	YWDXCTSJE102	Carbon	1K ohms 1/10W
R365	YWDXCTSJE202	Carbon	2K ohms 1/10W
R366	YWDXCTSJD221	Carbon	220 ohms 1/10W
R367	YWDXCTSJE102	Carbon	1K ohms 1/10W
R368	YWDXCTSJE202	Carbon	2K ohms 1/10W
R369	YWDXCTSJD221	Carbon	220 ohms 1/10W
R370	YWDXCTSJE102	Carbon	1K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R371	YWDXCTSJE202	Carbon	2K ohms 1/10W
R372	YWDXCTSJD221	Carbon	220 ohms 1/10W
R373	YWDXCTSJE102	Carbon	1K ohms 1/10W
R374	YWDXCTSJE202	Carbon	2K ohms 1/10W
R375	YWDXCTSJD221	Carbon	220 ohms 1/10W
R376	YWDXCTSJE102	Carbon	1K ohms 1/10W
R377,378	YWDXCTSJE202	Carbon	2K ohms 1/10W
R379	YWDXCTSJF563	Caarbon	56K ohms 1/10W
R380,381	YWDXCTSJE202	Carbon	2K ohms 1/10W
R382	YWDXCTSJG684	Carbon	680K ohms 1/10W
R383	YWDXCTSJD221	Carbon	220 ohms 1/10W
R384-415	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R416-419	YWDXMTSE5111	Metal	5.11K ohms
R420,421	YWDXCTSJE102	Carbon	1K ohms 1/10W
R422	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R424	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R426-429	YWDXMTSE5111	Metal	5.11K ohms
R430,431	YWDXCTSJE102	Carbon	1K ohms 1/10W
R432	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R434	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
C1	GRM40F104Z25	Ceramic	0.1 µF
C2	YWCX2C1HD181	Ceramic	180 pF
C3	GRM40F104Z25	Ceramic	0.1 µF
C4	YWCX2C1HD181	Ceramic	180 pF
C5	GRM40F104Z25	Ceramic	0.1 µF
C6	YWCX2C1HD181	Ceramic	180 pF
C7	GRM40F104Z25	Ceramic	0.1 µF
C8	YWCX2C1HD181	Ceramic	180 pF
C9	GRM40F104Z25	Ceramic	0.1 µF
C10	YWCX2C1HD181	Ceramic	180 pF
C11	GRM40F104Z25	Ceramic	0.1 µF
C12	YWCX2C1HD181	Ceramic	180 pF
C13	GRM40F104Z25	Ceramic	0.1 µF
C14	YWCX2C1HD181	Ceramic	180 pF
C15	GRM40F104Z25	Ceramic	0.1 µF
C16	YWCX2C1HD181	Ceramic	180 pF
C17	EEVHB0J470R	Electrolytic	47 µF 6.3V
C18	GRM40F104Z25	Ceramic	0.1 µF
C19	EEVHB0J470R	Electrolytic	47 µF 6.3V
C20	GRM40F104Z25	Ceramic	0.1 µF
C21	EEVHB0J470R	Electrolytic	47 µF 6.3V
C22	GRM40F104Z25	Ceramic	0.1 µF
C23	EEVHB0J470R	Electrolytic	47 µF 6.3V
C24	GRM40F104Z25	Ceramic	0.1 µF
C25	EEVHB0J470R	Electrolytic	47 µF 6.3V
C26	GRM40F104Z25	Ceramic	0.1 µF
C27	EEVHB0J470R	Electrolytic	47 µF 6.3V
C28	GRM40F104Z25	Ceramic	0.1 µF
C29	EEVHB0J470R	Electrolytic	47 µF 6.3V
C30	GRM40F104Z25	Ceramic	0.1 µF
C31	EEVHB0J470R	Electrolytic	47 µF 6.3V
C32	GRM40F104Z25	Ceramic	0.1 µF
C33-40	EEVHB0J470R	Electrolytic	47 µF 6.3V
C41,42	GRM40F104Z25	Ceramic	0.1 µF
C43,44	YWCX2F1CH105	Ceramic	1 µF

REF. NO.	PART NO.	DESCRIPTION	
C45	YWCX2C1HC390	Ceramic	3 9 pF
C46	GRM40F104Z25	Ceramic	0.1 µF
C47	GRM40CH100D5	Ceramic	10 pF
C49	GRM40CH100D5	Ceramic	10 pF
C51	GRM40CH100D5	Ceramic	10 pF
C53	GRM40CH100D5	Ceramic	10 pF
C55	GRM40CH100D5	Ceramic	10 pF
C57	GRM40CH100D5	Ceramic	10 pF
C59	GRM40CH100D5	Ceramic	10 pF
C61	GRM40CH100D5	Ceramic	10 pF
C63	YWCX2C1HD181	Ceramic	180 pF
C64	GRM40F104Z25	Ceramic	0.1 µF
C65	YWCX2C1HD181	Ceramic	180 pF
C66	GRM40F104Z25	Ceramic	0.1 µF
C67	YWCX2C1HD181	Ceramic	180 pF
C68	GRM40F104Z25	Ceramic	0.1 µF
C69	YWCX2C1HD181	Ceramic	180 pF
C70	GRM40F104Z25	Ceramic	0.1 µF
C71	YWCX2C1HD181	Ceramic	180 pF
C72	GRM40F104Z25	Ceramic	0.1 µF
C73	YWCX2C1HD181	Ceramic	180 pF
C74	GRM40F104Z25	Ceramic	0.1 µF
C75	YWCX2C1HD181	Ceramic	180 pF
C76	GRM40F104Z25	Ceramic	0.1 µF
C77	YWCX2C1HD181	Ceramic	180 pF
C78	GRM40F104Z25	Ceramic	0.1 µF
C79	YWCX2C1HD181	Ceramic	180 pF
C80	EEVHB0J470R	Electrolytic	47 µF 6.3V
C81	GRM40F104Z25	Ceramic	0.1 µF
C82	EEVHB0J470R	Electrolytic	47 µF 6.3V
C83	GRM40F104Z25	Ceramic	0.1 µF
C84	EEVHB0J470R	Electrolytic	47 µF 6.3V
C85	GRM40F104Z25	Ceramic	0.1 µF
C86	EEVHB0J470R	Electrolytic	47 µF 6.3V
C87	GRM40F104Z25	Ceramic	0.1 µF
C88	EEVHB0J470R	Electrolytic	47 µF 6.3V
C89	GRM40F104Z25	Ceramic	0.1 µF
C90	EEVHB0J470R	Electrolytic	47 µF 6.3V
C91	GRM40F104Z25	Ceramic	0.1 µF
C92	EEVHB0J470R	Electrolytic	47 µF 6.3V
C93	GRM40F104Z25	Ceramic	0.1 µF
C94	EEVHB0J470R	Electrolytic	47 µF 6.3V
C95	GRM40F104Z25	Ceramic	0.1 µF
C96-103	EEVHB0J470R	Electrolytic	47 µF 6.3V
C104	GRM40CH100D5	Ceramic	10 pF
C106	GRM40CH100D5	Ceramic	10 pF
C108	GRM40CH100D5	Ceramic	10 pF
C110	GRM40CH100D5	Ceramic	10 pF
C112	GRM40CH100D5	Ceramic	10 pF
C114	GRM40CH100D5	Ceramic	10 pF
C116	GRM40CH100D5	Ceramic	10 pF
C118	GRM40CH100D5	Ceramic	10 pF
C120-127	GRM40F104Z25	Ceramic	0.1 µF
C128-131	EEVHB0J470R	Electrolytic	47 µF 6.3V
C132-139	GRM40F104Z25	Ceramic	0.1 µF

REF. NO.	PART NO.	DESCRIPTION	
C140-143	EEVHB0J470R	Electrolytic	47 µF 6.3V
C144-151	GRM40F104Z25	Ceramic	0.1 µF
C152-155	EEVHB0J470R	Electrolytic	47 µF 6.3V
C156-163	GRM40F104Z25	Ceramic	0.1 µF
C164-167	EEVHB0J470R	Electrolytic	47 µF 6.3V
C168-175	GRM40F104Z25	Ceramic	0.1 µF
C176-179	EEVHB0J470R	Electrolytic	47 µF 6.3V
C180-187	GRM40F104Z25	Ceramic	0.1 µF
C188-191	EEVHB0J470R	Electrolytic	47 µF 6.3V
C192-199	GRM40F104Z25	Ceramic	0.1 µF
C200-203	EEVHB0J470R	Electrolytic	47 µF 6.3V
C204-211	GRM40F104Z25	Ceramic	0.1 µF
C212-215	EEVHB0J470R	Electrolytic	47 µF 6.3V
C216-218	GRM40F104Z25	Ceramic	0.1 µF
C219,220	EEVHB1C100R	Electrolytic	10 µF 16V
C221	GRM40F104Z25	Ceramic	0.1 µF
C222-224	EEVHB0J470R	Electrolytic	47 µF 6.3V
C225,226	YWCX4G0JD221	Electrolytic	220 pF
C227	GRM40F104Z25	Ceramic	0.1 µF
C228	GRM40B103K25	Ceramic	0.01 µF
C229	EEVHB1H2R2R	Electrolytic	2.2 µF 50V
C230	YWCX2F1HG224	Ceramic	0.22 µF
C231	GRM40F104Z25	Ceramic	0.1 µF
C232	EEVHB0J470R	Electrolytic	47 µF 6.3V
C233-235	GRM40F104Z25	Ceramic	0.1 µF
C236,237	EEVHB1C100R	Electrolytic	10 µF 16V
C238	GRM40F104Z25	Ceramic	0.1 µF
C239-241	EEVHB0J470R	Electrolytic	47 µF 6.3V
C242,243	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C244	GRM40F104Z25	Ceramic	0.1 µF
C245	GRM40B103K25	Ceramic	0.01 µF
C246	EEVHB1H2R2R	Electrolytic	2.2 µF 50V
C247	YWCX2F1HG224	Ceramic	0.22 µF
C248	GRM40F104Z25	Ceramic	0.1 µF
C249	EEVHB0J470R	Electrolytic	47 µF 6.3V
C250,251	GRM40F104Z25	Ceramic	0.1 µF
C252	GRM40CH470J5	Ceramic	47 pF
C253	YWCX2C1HD471	Ceramic	470 pF
C254,255	GRM40F104Z25	Ceramic	0.1 µF
C256	GRM40CH470J5	Ceramic	47 pF
C257	YWCX2C1HD471	Ceramic	470 pF
C258	GRM40CH100D5	Ceramic	10 pF
C262	GRM40CH100D5	Ceramic	10 pF
C266,267	EEVHB1H2R2R	Electrolytic	2.2 µF 50V
C268-270	GRM40F104Z25	Ceramic	0.1 µF
C271,272	EEVHB1C100R	Electrolytic	10 µF 16V
C273	GRM40F104Z25	Ceramic	0.1 µF
C274-276	EEVHB0J470R	Electrolytic	47 µF 6.3V
C277,278	YWCX4G0JD221	Electrolytic	220
C279	GRM40F104Z25	Ceramic	0.1 µF
C280	GRM40B103K25	Ceramic	0.01 µF
C281	EEVHB1H2R2R	Electrolytic	2.2 µF 50V
C282	YWCX2F1HG224	Ceramic	0.22 µF
C283	GRM40F104Z25	Ceramic	0.1 µF
C284	EEVHB0J470R	Electrolytic	47 µF 6.3V

REF. NO.	PART NO.	DESCRIPTION	
C285-287	GRM40F104Z25	Ceramic	0.1 µF
C288,289	EEVHB1C100R	Electrolytic	10 µF 16V
C290	GRM40F104Z25	Ceramic	0.1 µF
C291-293	EEVHB0J470R	Electrolytic	47 µF 6.3V
C294,295	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C296	GRM40F104Z25	Ceramic	0.1 µF
C297	GRM40B103K25	Ceramic	0.01 µF
C298	EEVHB1H2R2R	Electrolytic	2.2 µF 50V
C299	YWCX2F1HG224	Ceramic	0.22 µF
C300	GRM40F104Z25	Ceramic	0.1 µF
C301	EEVHB0J470R	Electrolytic	47 µF 6.3V
C302,303	GRM40F104Z25	Ceramic	0.1 µF
C304	GRM40CH470J5	Ceramic	47 pF
C305	YWCX2C1HD471	Ceramic	470 pF
C306,307	GRM40F104Z25	Ceramic	0.1 µF
C308	GRM40CH470J5	Ceramic	47 pF
C309	YWCX2C1HD471	Ceramic	470 pF
C310	GRM40CH100D5	Ceramic	10 pF
C314	GRM40CH100D5	Ceramic	10 pF
C318,319	EEVHB1H2R2R	Electrolytic	2.2 µF 50V
C320	GRM40F104Z25	Ceramic	0.1 µF
C321,322	GRM40CH220J5	Ceramic	22 pF
C323-335	GRM40F104Z25	Ceramic	0.1 µF
C336,337	EEVHB0J101P	Electrolytic	100 µF 6.3V
C338-342	EEVHB0J470R	Electrolytic	47 pF
C343	GRM40F104Z25	Ceramic	0.1 µF
C344-359	GRM40CH220J5	Ceramic	22 pF
C360	YWCX2C1HC390	Ceramic	39 pF
C361	YWCX2C1HD181	Ceramic	180 pF
C362-364	GRM40F104Z25	Ceramic	0.1 µF
C365,366	YWCX2F1CH105	Ceramic	1 µF
C367-374	GRM40F104Z25	Ceramic	0.1 µF
C375,376	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C377-420	GRM40F104Z25	Ceramic	0.1 µF
L1	YWE2LFC32101	Coil	100 µH
L2,3	YWE2SN5300	Coil	25 µH
L4	YWE2LFC32101	Coil	100 µH
FB1-4	YWE5BSHF50AT	Filter	
JPA1-8	YWG3XK6W200	Connector- pin	
TPG2	YWG5LC2SBK	Terminal	
TPG4,5	YWG5LC2SBK	Terminal	
TPG10	YWG5LC2SBK	Terminal	
TPG14-16	YWG5LC2SBK	Terminal	
LG1,2	YWA2QA0134A4	Earth Lug	
X1	YWZ6TR354.43	Crystal	
CN1-18	YWG1P2341	Connector	
CN19,20	YWG3IL4430SL	30-pin Connector	
CN21	YWG376406SC	40-pin Connector	
CN22	YWG3IL4426SL	26-pin Connector	
CN24	YWG3B04PSVH	4-pin Connector	

MTX-B BOARD

REF. NO.	PART NO.	DESCRIPTION	
PCB2 (RTL)	JSX35PRZ2BD	Printed Circuit Board Assy	
IC1-8	YWMC14577CF	IC	
IC10-17	YWMC14577CF	IC	
IC18-49	YWA65CX1558L	IC	
IC50	YWNJM2235M	IC	
IC51	YWMC14577CF	IC	
IC52	YWA8UM35055F	IC	
IC53	YWNJM2235M	IC	
IC54	YWMC14577CF	IC	
IC55	YWA8UM35055F	IC	
IC56	YWNJM2235M	IC	
IC57	YWMC14577CF	IC	
IC58	YWA8UM35055F	IC	
IC59	YWNJM2235M	IC	
IC60	YWMC14577CF	IC	
IC61	YWA8UM35055F	IC	
IC62	YWNJU6321PE	IC	
IC63,64	YWA5HC0245F	IC	
IC65-69	YWA5HC0595F	IC	
IC70-73	YWA5HC0139F	IC	
IC74	YWA5HC0595F	IC	
IC75,76	YWA5HC4051F	IC	
Q3-22	2SC2712GR	Transistor	
Q25-32	2SC2712GR	Transistor	
D1-20	YWDAN217	Diode	
RA1-5	YWDXARQJF103	Block Resistor	
R1	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R2	YWDXCTSJD101	Carbon	100 ohms 1/10W
R3	YWDXCTSJF513	Carbon	51K ohms 1/10W
R4	YWDXCTSJD511	Carbon	510 ohms 1/10W
R5,6	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R7	YWDXCTSJD101	Carbon	100 ohms 1/10W
R8	YWDXCTSJF513	Carbon	51K ohms 1/10W
R9	YWDXCTSJD511	Carbon	510 ohms 1/10W
R10,11	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R12	YWDXCTSJD101	Carbon	100 ohms 1/10W
R13	YWDXCTSJF513	Carbon	51K ohms 1/10W
R14	YWDXCTSJD511	Carbon	510 ohms 1/10W
R15,16	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R17	YWDXCTSJD101	Carbon	100 ohms 1/10W
R18	YWDXCTSJF513	Carbon	51K ohms 1/10W
R19	YWDXCTSJD511	Carbon	510 ohms 1/10W
R20,21	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R22	YWDXCTSJD101	Carbon	100 ohms 1/10W
R23	YWDXCTSJF513	Carbon	51K ohms 1/10W
R25,26	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R27	YWDXCTSJD101	Carbon	100 ohms 1/10W
R28	YWDXCTSJF513	Carbon	51K ohms 1/10W
R29	YWDXCTSJD511	Carbon	510 ohms 1/10W
R30,31	YWDXMTSC75R0	Carbon	75 ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R32	YWDXCTSJD101	Carbon	100 ohms 1/10W
R33	YWDXCTSJF513	Carbon	51K ohms 1/10W
R34	YWDXCTSJD511	Carbon	510 ohms 1/10W
R35,36	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R37	YWDXCTSJD101	Carbon	100 ohms 1/10W
R38	YWDXCTSJF513	Carbon	51K ohms 1/10W
R39	YWDXCTSJD511	Carbon	510 ohms 1/10W
R40-48	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R49-56	YWDXCTSJD511	Carbon	510 ohms 1/10W
R63	YWDXCTSJD101	Carbon	100 ohms 1/10W
R64	YWDXCTSJF513	Carbon	51K ohms 1/10W
R65	YWDXCTSJD511	Carbon	510 ohms 1/10W
R66,67	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R68	YWDXCTSJD101	Carbon	100 ohms 1/10W
R69	YWDXCTSJF513	Carbon	51K ohms 1/10W
R70	YWDXCTSJD511	Carbon	510 ohms 1/10W
R71,72	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R73	YWDXCTSJD101	Carbon	100 ohms 1/10W
R74	YWDXCTSJF513	Carbon	51K ohms 1/10W
R75	YWDXCTSJD511	Carbon	510 ohms 1/10W
R76,77	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R78	YWDXCTSJD101	Carbon	100 ohms 1/10W
R79	YWDXCTSJF513	Carbon	51K ohms 1/10W
R80	YWDXCTSJD511	Carbon	510 ohms 1/10W
R81,82	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R83	YWDXCTSJD101	Carbon	100 ohms 1/10W
R84	YWDXCTSJF513	Carbon	51K ohms 1/10W
R85	YWDXCTSJD511	Carbon	510 ohms 1/10W
R86,87	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R88	YWDXCTSJD101	Carbon	100 ohms 1/10W
R89	YWDXCTSJF513	Carbon	51K ohms 1/10W
R90	YWDXCTSJD511	Carbon	510 ohms 1/10W
R91,92	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R93	YWDXCTSJD101	Carbon	100 ohms 1/10W
R94	YWDXCTSJF513	Carbon	51K ohms 1/10W
R95	YWDXCTSJD511	Carbon	510 ohms 1/10W
R96,97	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R98	YWDXCTSJD101	Carbon	100 ohms 1/10W
R99	YWDXCTSJF513	Carbon	51K ohms 1/10W
R100	YWDXCTSJD511	Carbon	510 ohms 1/10W
R101-110	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R111-118	YWDXCTSJD511	Carbon	510 ohms 1/10W
R119-126	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R127-130	YWDXCTSJD151	Carbon	150 ohms 1/10W
R131-138	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R139-142	YWDXCTSJD151	Carbon	150 ohms 1/10W
R143-150	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R151-154	YWDXCTSJD151	Carbon	150 ohms 1/10W
R155-162	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R163-166	YWDXCTSJD151	Carbon	150 ohms 1/10W
R167-174	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R175-178	YWDXCTSJD151	Carbon	150 ohms 1/10W
R179-186	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R187-190	YWDXCTSJD151	Carbon	150 ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R191-198	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R199-202	YWDXCTSJD151	Carbon	150 ohms 1/10W
R203-210	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R211-214	YWDXCTSJD151	Carbon	150 ohms 1/10W
R215	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R216	YWDXCTSJD621	Carbon	620 ohms 1/10W
R217	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R218	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R219,220	YWDXCTSJD151	Carbon	150 ohms 1/10W
R221	YWDXCTSJG104	Carbon	100K ohms 1/10W
R222	YWDXCTSJA0R0	C arbon	0 ohm 1/10W
R224	YWDXCTSJA0R0	C arbon	0 ohm 1/10W
R226,227	YWDXCTSJG104	Carbon	100K ohms 1/10W
R228	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R229	YWDXCTSJD621	Carbon	620 ohms 1/10W
R230	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R231	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R232,233	YWDXCTSJD151	Carbon	150 ohms 1/10W
R234	YWDXCTSJG104	Carbon	100K ohms 1/10W
R235	YWDXCTSJA0R0	Resistor	0 ohm 1/10W
R237	YWDXCTSJA0R0	Resistor	0 ohm 1/10W
R239,240	YWDXCTSJG104	Carbon	100K ohms 1/10W
R241	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R242	YWDXCTSJD151	Carbon	150 ohms 1/10W
R243	YWDXCTSJE102	Carbon	1K ohms 1/10W
R244	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R245	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R246	YWDXCTSJD151	Carbon	150 ohms 1/10W
R247	YWDXCTSJE102	Carbon	1K ohms 1/10W
R248	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R249	YWDXCTSJD511	Carbon	510 ohms 1/10W
R251	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R252	YWDXCTSJD511	Carbon	510 ohms 1/10W
R254	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R255	YWDXMTSE9091	Metal	9.09K ohms
R256,257	YWDXMTSE3831	Metal	3.83K ohms
R258	YWDXMTSE9091	Metal	9.09K ohms
R259	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R260	YWDXCTSJD621	Carbon	620 ohms 1/10W
R261	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R262	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R263,264	YWDXCTSJD151	Carbon	150 ohms 1/10W
R265	YWDXCTSJG104	Carbon	100K ohms 1/10W
R266	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R268	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R270,271	YWDXCTSJG104	Carbon	100K ohms 1/10W
R272	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R273	YWDXCTSJD621	Carbon	620 ohms 1/10W
R274	YWDXMTSC75R0	Carbon	75 ohms 1/10W
R275	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R276,277	YWDXCTSJD151	Carbon	150 ohms 1/10W
R278	YWDXCTSJG104	Carbon	100K ohms 1/10W
R279	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R281	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R283,284	YWDXCTSJG104	Carbon	100K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R285	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R286	YWDXCTSJD151	Carbon	150 ohms 1/10W
R287	YWDXCTSJE102	Carbon	1K ohms 1/10W
R288	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R289	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R290	YWDXCTSJD151	Carbon	150 ohms 1/10W
R291	YWDXCTSJE102	Carbon	1K ohms 1/10W
R292	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R293	YWDXCTSJD511	Carbon	510 ohms 1/10W
R295	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R296	YWDXCTSJD511	Carbon	510 ohms 1/10W
R298	YWDXCTSJE512	Carbon	5.1K ohms 1/10W
R299	YWDXMTSE3831	Metal	3.83K ohms
R300	YWDXMTSE9091	Metal	9.09K ohms
R301	YWDXMTSE3831	Metal	3.83K ohms
R302	YWDXMTSE9091	Metal	9.09K ohms
R304-307	YWDXCTSJD101	Carbon	100 ohms 1/10W
R309	YWDXCTSJD101	Carbon	100 ohms 1/10W
R311	YWDXCTSJE102	Carbon	1K ohms 1/10W
R312	YWDXCTSJG104	Carbon	100K ohms 1/10W
R313	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R315	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R320-323	YWDXCTSJD101	Carbon	100 ohms 1/10W
R327	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R330	YWDXCTSJD221	Carbon	220 ohms 1/10W
R331	YWDXCTSJE102	Carbon	1K ohms 1/10W
R332	YWDXCTSJE202	Carbon	2K ohms 1/10W
R333	YWDXCTSJD221	Carbon	220 ohms 1/10W
R334	YWDXCTSJE102	Carbon	1K ohms 1/10W
R335	YWDXCTSJE202	Carbon	2K ohms 1/10W
R336	YWDXCTSJD221	Carbon	220 ohms 1/10W
R337	YWDXCTSJE102	Carbon	1K ohms 1/10W
R338	YWDXCTSJE202	Carbon	2K ohms 1/10W
R339	YWDXCTSJD221	Carbon	220 ohms 1/10W
R340	YWDXCTSJE102	Carbon	1K ohms 1/10W
R341	YWDXCTSJE202	Carbon	2K ohms 1/10W
R342	YWDXCTSJD221	Carbon	220 ohms 1/10W
R343	YWDXCTSJE102	Carbon	1K ohms 1/10W
R344	YWDXCTSJE202	Carbon	2K ohms 1/10W
R345	YWDXCTSJD221	Carbon	220 ohms 1/10W
R346	YWDXCTSJE102	Carbon	1K ohms 1/10W
R347	YWDXCTSJE202	Carbon	2K ohms 1/10W
R348	YWDXCTSJD221	Carbon	220 ohms 1/10W
R349	YWDXCTSJE102	Carbon	1K ohms 1/10W
R350	YWDXCTSJE202	Carbon	2K ohms 1/10W
R351	YWDXCTSJD221	Carbon	220 ohms 1/10W
R352	YWDXCTSJE102	Carbon	1K ohms 1/10W
R353	YWDXCTSJE202	Carbon	2K ohms 1/10W
R354	YWDXCTSJD221	Carbon	220 ohms 1/10W
R355	YWDXCTSJE102	Carbon	1K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R356	YWDXCTSJE202	Carbon	2K ohms 1/10W
R357	YWDXCTSJD221	Carbon	220 ohms 1/10W
R358	YWDXCTSJE102	Carbon	1K ohms 1/10W
R359	YWDXCTSJE202	Carbon	2K ohms 1/10W
R360	YWDXCTSJD221	Carbon	220 ohms 1/10W
R361	YWDXCTSJE102	Carbon	1K ohms 1/10W
R362	YWDXCTSJE202	Carbon	2K ohms 1/10W
R363	YWDXCTSJD221	Carbon	220 ohms 1/10W
R364	YWDXCTSJE102	Carbon	1K ohms 1/10W
R365	YWDXCTSJE202	Carbon	2K ohms 1/10W
R366	YWDXCTSJD221	Carbon	220 ohms 1/10W
R368	YWDXCTSJE202	Carbon	2K ohms 1/10W
R369	YWDXCTSJD221	Carbon	220 ohms 1/10W
R371	YWDXCTSJE202	Carbon	2K ohms 1/10W
R372	YWDXCTSJD221	Carbon	220 ohms 1/10W
R374	YWDXCTSJE202	Carbon	2K ohms 1/10W
R375	YWDXCTSJD221	Carbon	220 ohms 1/10W
R377	YWDXCTSJE202	Carbon	2K ohms 1/10W
R384-415	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R416-419	YWDXMTSE5111	Metal	5.11K ohms
R420,421	YWDXCTSJE102	Carbon	1K ohms 1/10W
R422	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R424	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R426-429	YWDXMTSE5111	Metal	5.11K ohms
R430,431	YWDXCTSJE102	Carbon	1K ohms 1/10W
R432	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
R434	YWDXMTSJB4R7	Carbon	4.7 ohms 1/10W
C1	GRM40F104Z25	Ceramic	0.1 µF
C2	YWCX2C1HD181	Ceramic	180 pF
C3	GRM40F104Z25	Ceramic	0.1 µF
C4	YWCX2C1HD181	Ceramic	180 pF
C5	GRM40F104Z25	Ceramic	0.1 µF
C6	YWCX2C1HD181	Ceramic	180 pF
C7	GRM40F104Z25	Ceramic	0.1 µF
C8	YWCX2C1HD181	Ceramic	180 pF
C9	GRM40F104Z25	Ceramic	0.1 µF
C10	YWCX2C1HD181	Ceramic	180 pF
C11	GRM40F104Z25	Ceramic	0.1 µF
C12	YWCX2C1HD181	Ceramic	180 pF
C13	GRM40F104Z25	Ceramic	0.1 µF
C14	YWCX2C1HD181	Ceramic	180 pF
C15	GRM40F104Z25	Ceramic	0.1 µF
C16	YWCX2C1HD181	Ceramic	180 pF
C17	EEVHB0J470R	Electrolytic	47 pF 6.3V
C18	GRM40F104Z25	Ceramic	0.1 µF
C19	EEVHB0J470R	Electrolytic	47 µF 6.3V
C20	GRM40F104Z25	Ceramic	0.1 µF
C21	EEVHB0J470R	Electrolytic	47 µF 6.3V
C22	GRM40F104Z25	Ceramic	0.1 µF
C23	EEVHB0J470R	Electrolytic	47 µF 6.3V
C24	GRM40F104Z25	Ceramic	0.1 µF
C25	EEVHB0J470R	Electrolytic	47 µF 6.3V
C26	GRM40F104Z25	Ceramic	0.1 µF
C27	EEVHB0J470R	Electrolytic	47 µF 6.3V
C28	GRM40F104Z25	Ceramic	0.1 µF

REF. NO.	PART NO.	DESCRIPTION	
C29	EEVHB0J470R	Electrolytic	47 µF 6.3V
C30	GRM40F104Z25	Ceramic	0.1 µF
C31	EEVHB0J470R	Electrolytic	47 µF 6.3V
C32	GRM40F104Z25	Ceramic	0.1 µF
C33-40	EEVHB0J470R	Electrolytic	47 µF 6.3V
C47	GRM40CH100J5	Ceramic	10 pF
C49	GRM40CH100J5	Ceramic	10 pF
C51	GRM40CH100J5	Ceramic	10 pF
C53	GRM40CH100J5	Ceramic	10 pF
C55	GRM40CH100J5	Ceramic	10 pF
C57	GRM40CH100J5	Ceramic	10 pF
C59	GRM40CH100J5	Ceramic	10 pF
C61	GRM40CH100J5	Ceramic	10 pF
C64	GRM40F104Z25	Ceramic	0.1 µF
C65	YWCX2C1HD181	Ceramic	180 pF
C66	GRM40F104Z25	Ceramic	0.1 µF
C67	YWCX2C1HD181	Ceramic	180 pF
C68	GRM40F104Z25	Ceramic	0.1 µF
C69	YWCX2C1HD181	Ceramic	180 pF
C70	GRM40F104Z25	Ceramic	0.1 µF
C71	YWCX2C1HD181	Ceramic	180 pF
C72	GRM40F104Z25	Ceramic	0.1 µF
C73	YWCX2C1HD181	Ceramic	180 pF
C74	GRM40F104Z25	Ceramic	0.1 µF
C75	YWCX2C1HD181	Ceramic	180 pF
C76	GRM40F104Z25	Ceramic	0.1 µF
C77	YWCX2C1HD181	Ceramic	180 pF
C78	GRM40F104Z25	Ceramic	0.1 µF
C79	YWCX2C1HD181	Ceramic	180 pF
C80	EEVHB0J470R	Electrolytic	47 µF 6.3V
C81	GRM40F104Z25	Ceramic	0.1 µF
C82	EEVHB0J470R	Electrolytic	47 µF 6.3V
C83	GRM40F104Z25	Ceramic	0.1 µF
C84	EEVHB0J470R	Electrolytic	47 µF 6.3V
C85	GRM40F104Z25	Ceramic	0.1 µF
C86	EEVHB0J470R	Electrolytic	47 µF 6.3V
C87	GRM40F104Z25	Ceramic	0.1 µF
C88	EEVHB0J470R	Electrolytic	47 µF 6.3V
C89	GRM40F104Z25	Ceramic	0.1 µF
C90	EEVHB0J470R	Electrolytic	47 µF 6.3V
C91	GRM40F104Z25	Ceramic	0.1 µF
C92	EEVHB0J470R	Electrolytic	47 µF 6.3V
C93	GRM40F104Z25	Ceramic	0.1 µF
C94	EEVHB0J470R	Electrolytic	47 µF 6.3V
C95	GRM40F104Z25	Ceramic	0.1 µF
C96-103	EEVHB0J470R	Electrolytic	47 µF 6.3V
C104	GRM40CH100J5	Ceramic	10 pF
C106	GRM40CH100J5	Ceramic	10 pF
C108	GRM40CH100J5	Ceramic	10 pF
C110	GRM40CH100J5	Ceramic	10 pF
C112	GRM40CH100J5	Ceramic	10 pF
C114	GRM40CH100J5	Ceramic	10 pF
C116	GRM40CH100J5	Ceramic	10 pF
C118	GRM40CH100J5	Ceramic	10 pF
C120-127	GRM40F104Z25	Ceramic	0.1 µF

REF. NO.	PART NO.	DESCRIPTION	
C128-131	EEVHB0J470R	Electrolytic	47 µF 6.3V
C132-139	GRM40F104Z25	Ceramic	0.1 µF
C140-143	EEVHB0J470R	Electrolytic	47 µF 6.3V
C144-151	GRM40F104Z25	Ceramic	0.1 µF
C152-155	EEVHB0J470R	Electrolytic	47 µF 6.3V
C156-163	GRM40F104Z25	Ceramic	0.1 µF
C164-167	EEVHB0J470R	Electrolytic	47 µF 6.3V
C168-175	GRM40F104Z25	Ceramic	0.1 µF
C176-179	EEVHB0J470R	Electrolytic	47 µF 6.3V
C180187	GRM40F104Z25	Ceramic	0.1 µF
C188-191	EEVHB0J470R	Electrolytic	47 µF 6.3V
C192-199	GRM40F104Z25	Ceramic	0.1 µF
C200-203	EEVHB0J470R	Electrolytic	47 µF 6.3V
C204-211	GRM40F104Z25	Ceramic	0.1 µF
C212-215	EEVHB0J470R	Electrolytic	47 µF 6.3V
C216-218	GRM40F104Z25	Ceramic	0.1 µF
C219,220	EEVHA1C100R	Electrolytic	10 µF 16V
C221	GRM40F104Z25	Ceramic	0.1 µF
C222-224	EEVHB0J470R	Electrolytic	47 µF 6.3V
C225,226	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C227	GRM40F104Z25	Ceramic	0.1 µF
C228	GRM40B103K25	Ceramic	0.01 µF
C229	EEVHA1H2R2R	Electrolytic	2.2 µF 50V
C230	YWCX2F1HG224	Ceramic	0.22 µF
C231	GRM40F104Z25	Ceramic	0.1 µF
C232	EEVHB0J470R	Electrolytic	47 µF 6.3V
C233-235	GRM40F104Z25	Ceramic	0.1 µF
C236,237	EEVHA1C100R	Electrolytic	10 µF 16V
C238	GRM40F104Z25	Ceramic	0.1 µF
C239-241	EEVHB0J470R	Electrolytic	47 µF 6.3V
C242,243	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C244	GRM40F104Z25	Ceramic	0.1 µF
C245	GRM40B103K25	Ceramic	0.01 µF
C246	EEVHA1H2R2R	Electrolytic	2.2 µF 50V
C247	YWCX2F1HG224	Ceramic	0.22 µF
C248	GRM40F104Z25	Ceramic	0.1 µF
C249	EEVHB0J470R	Electrolytic	47 µF 6.3V
C250,251	GRM40F104Z25	Ceramic	0.1 µF
C252	GRM40CH470J5	Ceramic	47 pF
C253	YWCX2C1HD471	Ceramic	470 pF
C254,255	GRM40F104Z25	Ceramic	0.1 µF
C256	GRM40CH470J5	Ceramic	47 pF
C257	YWCX2C1HD471	Ceramic	470 pF
C258	GRM40CH100J5	Ceramic	10 pF
C262	GRM40CH100J5	Ceramic	10 pF
C266,267	EEVHA1H2R2R	Electrolytic	2.2 µF 50V
C268-270	GRM40F104Z25	Ceramic	0.1 µF
C271,272	EEVHA1C100R	Electrolytic	10 µF 16V
C273	GRM40F104Z25	Ceramic	0.1 µF
C274-276	EEVHB0J470R	Electrolytic	47 µF 6.3V
C277,278	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C279	GRM40F104Z25	Ceramic	0.1 µF
C280	GRM40B103K25	Ceramic	0.01 µF
C281	EEVHA1H2R2R	Electrolytic	2.2 µF 50V
C282	YWCX2F1HG224	Ceramic	0.22 µF

REF. NO.	PART NO.	DESCRIPTION	
C283	GRM40F104Z25	Ceramic	0.1 µF
C284	EEVHB0J470R	Electrolytic	47 µF 6.3V
C285-287	GRM40F104Z25	Ceramic	0.1 µF
C288,289	EEVHA1C100R	Electrolytic	10 µF 16V
C290	GRM40F104Z25	Ceramic	0.1 µF
C291-293	EEVHB0J470R	Electrolytic	47 µF 6.3V
C294,295	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C296	GRM40F104Z25	Ceramic	0.1 µF
C297	GRM40B103K25	Ceramic	0.01 µF
C298	EEVHA1H2R2R	Electrolytic	2.2 µF 50V
C299	YWCX2F1HG224	Ceramic	0.22 µF
C300	GRM40F104Z25	Ceramic	0.1 µF
C301	EEVHB0J470R	Electrolytic	47 µF 6.3V
C302,303	GRM40F104Z25	Ceramic	0.1 µF
C304	GRM40CH470J5	Ceramic	47 pF
C305	YWCX2C1HD471	Ceramic	470 pF
C306,307	GRM40F104Z25	Ceramic	0.1 µF
C308	GRM40CH470J5	Ceramic	47 pF
C309	YWCX2C1HD471	Ceramic	470 pF
C310	GRM40CH100J5	Ceramic	10 pF
C314	GRM40CH100J5	Ceramic	10 pF
C318,319	EEVHA1H2R2R	Electrolytic	2.2 µF 50V
C320	GRM40F104Z25	Ceramic	0.1 µF
C321,322	GRM40VH220J5	Ceramic	22 pF
C323-335	GRM40F104Z25	Ceramic	0.1 µF
C336,337	EEVHB0J101P	Electrolytic	100 µF 6.3V
C338-342	EEVHB0J470R	Electrolytic	47 µF 6.3V
C343	GRM40F104Z25	Ceramic	0.1 µF
C344-359	GRM40VH220J5	Ceramic	22 pF
C367-374	GRM40F104Z25	Ceramic	0.1 µF
C375,376	YWCX4G0JD221	Electrolytic	220 µF 6.3V
C377-420	GRM40F104Z25	Ceramic	0.1 µF
L2,3	YWE2SN5300	Coil	25 µH
FB1-4	YWE5BSHF50AT	Filter	
JPB1-8	YWG3XK6W200	Connector- pin	
TPG2-5	YWG5LC2SBK	Terminal	
TPG10	YWG5LC2SBK	Terminal	
TPG14-16	YWG5LC2SBK	Terminal	
X1	YWZ6TR354.43	Crystal	
LG1,2	YWA2QA0134A4	Earth Lug	
CN1-18	YWG1P2341	Connector	
CN19,20	YWG3IL4430SL	30-pin Connector	
CN21	YWG376406SC	40-pin Connector	
CN22,23	YWG3IL4426SL	26-pin Connector	
CN24	YWG3B04PSVH	4-pin Connector	

MPU BOARD

REF. NO.	PART NO.	DESCRIPTION
PCB3 (RTL)	JSX35PRZ1-2	Printed Circuit Board Assy
IC1	YWA8M68301FR	IC
IC3	YWA8R8576AB	IC
IC4,5	YWA7S4310007	IC
IC8	YWM62021FP	IC
IC9	YWNJU6321PE	IC
IC10	YWA7S7C13655	IC
IC12	YWA7E29F4009	IC
IC14	YWA5HC0005F	IC
IC15	YWA5HHC573FP	IC
IC17	YWA7S4325670	IC
IC18	YWA7E0512C10	IC
IC19	UPD784031GC	IC
IC20	YWNJU6321PE	IC
IC21	YWTE7774	IC
IC23	YWA5HC0138F	IC
IC25	YWAAPM6229	IC
IC27	YWA5HC0005F	IC
IC28	YWTE7551	IC
IC29	YWTC74HC08AF	IC
IC30	YWTC74HC14AF	IC
IC31,32	YWA5HC0245F	IC
IC33	YWM66300FP	IC
IC34	YWA1LS0145NS	IC
IC35	TC74HC04AF	IC
IC36-39	HD74HC123AFP	IC
IC42	TC74HC04AF	IC
IC43-46	HD74HC123AFP	IC
IC47-52	YWA4MAX489CS	IC
IC53	YWA4HIN202CB	IC
IC54	HD74HC123AFP	IC
Q1-9	DTA114EKAT146	Transistor
Q10	DTC114EKAT146	Transistor
Q11,12	DTD114	Transistor
Q13	DTC114EKAT146	Transistor
Q14	DTD114	Transistor
Q15	DTC114EKAT146	Transistor
Q16	DTD114	Transistor
Q17,18	2SC2712GR	Transistor
Q19	DTD114	Transistor
Q20	DTC114EKAT146	Transistor
Q21	DTD114	Transistor
Q22	2SC2712GR	Transistor
Q23	DTD114	Transistor
Q24	DTC114EKAT146	Transistor
Q25	DTD114	Transistor
Q26	2SC2712GR	Transistor

REF. NO.	PART NO.	DESCRIPTION	
Q27	DTD114	Transistor	
Q28	DTC114EKAT146	Transistor	
Q29	DTD114	Transistor	
Q30	2SC2712GR	Transistor	
Q31	DTD114	Transistor	
Q32	DTC114EKAT146	Transistor	
Q33	DTD114	Transistor	
Q34	2SC2712GR	Transistor	
Q35	B0DTD114T	Transistor	
Q36	DTC114EKAT146	Transistor	
Q37	DTD141	Transistor	
Q38	2SC2712GR	Transistor	
Q39	DTC114EKAT146	Transistor	
Q40,41	DTD114	Transistor	
Q42	2SC2712GR	Transistor	
Q43-86	DTA114EKAT146	Transistor	
Q87-90	DTD141	Transistor	
D1	YWB2RB751V4T	Diode	
D2-41	YW1SS355T	Diode	
D63,64	YWDAN217T146	Diode	
D66-92	YWDAN217T146	Diode	
D94	YWDAN217T146	Diode	
D100,101	YWDAN217T146	Diode	
VS1-20	ERZV05D820	Varistor	
LED1,2	YWB3SML210R	LED	
LED3	YWB3SML210G	LED	
LED4	YWB3SML210R	LED	
LED5	YWB3SML210G	LED	
LED6	YWB3SML210R	LED	
LED7	YWB3SML210G	LED	
LED8	YWB3SML210R	LED	
LED9	YWB3SML210G	LED	
LED11	YWB3SML210R	LED	
LED18	YWB3SML210G	LED	
LED19	YWB3SML210G	LED	
RA1-14	YWDXARQJF103	Block Resistor	
RA16-26	YWDXARQJD221	Block Resistor	
RA27,28	YWDXARQJF103	Block Resistor	
RA29-40	YWDXARQJD221	Block Resistor	
R1-3	YWDXCTSJF103	Carbon	10K ohms 1/10W
R4	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R5	YWDXCTSJE202	Carbon	2K ohms 1/10W
R6	YWDXCTSJF103	Carbon	10K ohms 1/10W
R7-10	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R11	YWDXCTSJD111	Carbon	110 ohms 1/10W
R12	YWDXCTSJD111	Carbon	110 ohms 1/10W
R13	YWDXCTSJD271	Carbon	270 ohms 1/10W
R14	YWDXCTSJD201	Carbon	200 ohms 1/10W
R16-23	YWDXCTSJE202	Carbon	2K ohms 1/10W
R24-27	YWDXCTSJC100	Carbon	10 ohms 1/10W
R32,33	YWDXCTSJD201	Carbon	200 ohms 1/10W
R34,35	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R37	YWDXCTSJE102	Carbon	1K ohms 1/10W
R38	YWDXCTSJE102	Carbon	1K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R39	YWDXCTSJA0R0	Carbon	0 ohm 1/10W
R40	YWDXCTSJD101	Carbon	100 ohms 1/10W
R41-44	YWDXCTSJF223	Carbon	22K ohms 1/10W
R45-53	YWDXCTSJD101	Carbon	100 ohms 1/10W
R54	YWDXCTSJF103	Carbon	10K ohms 1/10W
R55-58	YWDXCTSJD101	Carbon	100 ohms 1/10W
R59,60	YWDXCTSJF103	Carbon	10K ohms 1/10W
R61,62	YWDXCTSJD101	Carbon	100 ohms 1/10W
R63-66	YWDXCTSJD511	Carbon	510 ohms 1/10W
R67	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R68	YWDXCTSJC100	Carbon	10 ohms 1/10W
R69	YWDXCTSJH105	Carbon	1M ohms 1/10W
R70	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R71	YWDXCTSJF103	Carbon	10K ohms 1/10W
R72	YWDXCTSJD101	Carbon	100 ohms 1/10W
R73	YWDXCTSJH105	Carbon	1M ohms 1/10W
R74	YWDXCTSJF223	Carbon	22K ohms 1/10W
R75	YWDXCTSJG104	Carbon	100K ohms 1/10W
R76	YWDXCTSJF153	Carbon	15K ohms 1/10W
R77	YWDXCTSJF103	Carbon	10K ohms 1/10W
R78	YWDXCTSJD101	Carbon	100 ohms 1/10W
R79	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R80-82	YWDXCTSJC100	Carbon	10 ohms 1/10W
R83	YWDXCTSJH105	Carbon	1M ohms 1/10W
R84	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R85	YWDXCTSJD101	Carbon	100 ohms 1/10W
R86	YWDXCTSJF103	Carbon	10K ohms 1/10W
R87	YWDXCTSJH105	Carbon	1M ohms 1/10W
R88	YWDXCTSJF223	Carbon	22K ohms 1/10W
R89	YWDXCTSJG104	Carbon	100K ohms 1/10W
R90	YWDXCTSJF153	Carbon	15K ohms 1/10W
R91	YWDXCTSJF103	Carbon	10K ohms 1/10W
R92	YWDXCTSJD101	Carbon	100 ohms 1/10W
R93	YWDXCTSJF153	Carbon	15K ohms 1/10W
R94,95	YWDXCTSJE202	Carbon	2K ohms 1/10W
R96	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R97	YWDXCTSJC100	Carbon	10 ohms 1/10W
R98	YWDXCTSJH105	Carbon	1M ohms 1/10W
R99	YWDXCTSJD101	Carbon	100 ohms 1/10W
R100	YWDXCTSJF103	Carbon	10K ohms 1/10W
R101	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R102	YWDXCTSJH105	Carbon	1M ohms 1/10W
R103	YWDXCTSJF223	Carbon	22K ohms 1/10W
R104	YWDXCTSJG104	Carbon	100K ohms 1/10W
R105	YWDXCTSJD101	Carbon	100 ohms 1/10W
R106	YWDXCTSJF103	Carbon	10K ohms 1/10W
R107	YWDXCTSJF153	Carbon	15K ohms 1/10W
R108	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R109-111	YWDXCTSJC100	Carbon	10 ohms 1/10W
R112	YWDXCTSJH105	Carbon	1M ohms 1/10W
R113	YWDXCTSJD101	Carbon	100 ohms 1/10W
R114	YWDXCTSJF103	Carbon	10K ohms 1/10W
R115	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R116	YWDXCTSJH105	Carbon	1M ohms 1/10W
R117	YWDXCTSJF223	Carbon	22K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R118	YWDXCTSJG104	Carbon	100K ohms 1/10W
R119	YWDXCTSJF103	Carbon	10K ohms 1/10W
R120	YWDXCTSJF153	Carbon	15K ohms 1/10W
R121	YWDXCTSJD101	Carbon	100 ohms 1/10W
R122	YWDXCTSJE102	Carbon	1K ohms 1/10W
R123	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R124,125	YWDXCTSJC100	Carbon	10 ohms 1/10W
R126	YWDXCTSJH105	Carbon	1M ohms 1/10W
R127	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R128	YWDXCTSJD101	Carbon	100 ohms 1/10W
R129	YWDXCTSJF103	Carbon	10K ohms 1/10W
R130	YWDXCTSJH105	Carbon	1M ohms 1/10W
R131	YWDXCTSJF223	Carbon	22K ohms 1/10W
R132	YWDXCTSJG104	Carbon	100K ohms 1/10W
R133	YWDXCTSJF153	Carbon	15K ohms 1/10W
R134	YWDXCTSJF103	Carbon	10K ohms 1/10W
R135	YWDXCTSJF153	Carbon	15K ohms 1/10W
R136	YWDXCTSJD101	Carbon	100 ohms 1/10W
R137	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R138,139	YWDXCTSJC100	Carbon	10 ohms 1/10W
R140	YWDXCTSJH105	Carbon	1M ohms 1/10W
R141	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R142	YWDXCTSJD101	Carbon	100 ohms 1/10W
R143	YWDXCTSJF103	Carbon	10K ohms 1/10W
R144	YWDXCTSJH105	Carbon	1M ohms 1/10W
R145	YWDXCTSJF223	Carbon	22K ohms 1/10W
R146	YWDXCTSJG104	Carbon	100K ohms 1/10W
R147	YWDXCTSJF153	Carbon	15K ohms 1/10W
R148	YWDXCTSJF103	Carbon	10K ohms 1/10W
R149	YWDXCTSJF153	Carbon	15K ohms 1/10W
R150	YWDXCTSJD101	Carbon	100 ohms 1/10W
R151	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R152,153	YWDXCTSJC100	Carbon	10 ohms 1/10W
R154	YWDXCTSJH105	Carbon	1M ohms 1/10W
R155	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R156	YWDXCTSJF103	Carbon	10K ohms 1/10W
R157	YWDXCTSJD101	Carbon	100 ohms 1/10W
R158	YWDXCTSJH105	Carbon	1M ohms 1/10W
R159	YWDXCTSJF223	Carbon	22K ohms 1/10W
R160	YWDXCTSJG104	Carbon	100K ohms 1/10W
R161	YWDXCTSJF153	Carbon	15K ohms 1/10W
R162	YWDXCTSJF103	Carbon	10K ohms 1/10W
R163	YWDXCTSJD101	Carbon	100 ohms 1/10W
R164	YWDXCTSJF153	Carbon	15K ohms 1/10W
R165	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R166,167	YWDXCTSJC100	Carbon	10 ohms 1/10W
R168	YWDXCTSJH105	Carbon	1M ohms 1/10W
R169	YWDXCTSJE152	Carbon	1.5K ohms 1/10W
R170	YWDXCTSJD101	Carbon	100 ohms 1/10W
R171	YWDXCTSJF103	Carbon	10K ohms 1/10W
R172	YWDXCTSJH105	Carbon	1M ohms 1/10W
R173	YWDXCTSJF223	Carbon	22K ohms 1/10W
R174	YWDXCTSJF103	Carbon	10K ohms 1/10W
R175	YWDXCTSJG104	Carbon	100K ohms 1/10W
R176,177	YWDXCTSJF153	Carbon	15K ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R178	YWDXCTSJD101	Carbon	100 ohms 1/10W
R179	YWDXCTSJF103	Carbon	10K ohms 1/10W
R180	YWDXCTSJE102	Carbon	1K ohms 1/10W
R181	YWDXCT2JD151	Carbon	150 ohms 1/10W
R182	YWDXCTSJE102	Carbon	1K ohms 1/10W
R183,184	YWDXCTSJF103	Carbon	10K ohms 1/10W
R189	YWDXCTSJE102	Carbon	1K ohms 1/10W
R190	YWDXCT2JD151	Carbon	150 ohms 1/10W
R191	YWDXCTSJE102	Carbon	1K ohms 1/10W
R192	YWDXCTSJF103	Carbon	10K ohms 1/10W
R193	YWDXCTSJF153	Carbon	15K ohms 1/10W
R194	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R195	YWDXCT2JD151	Carbon	150 ohms 1/10W
R196	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R197,198	YWDXCTSJF153	Carbon	15K ohms 1/10W
R199	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R200	YWDXCT2JD151	Carbon	150 ohms 1/10W
R201	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R202,203	YWDXCTSJF153	Carbon	15K ohms 1/10W
R204	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R205	YWDXCT2JD151	Carbon	150 ohms 1/10W
R206	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R207,208	YWDXCTSJF153	Carbon	15K ohms 1/10W
R209	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R210	YWDXCT2JD151	Carbon	150 ohms 1/10W
R211	YWDXCTSJE222	Carbon	2.2K ohms 1/10W
R212	YWDXCTSJF153	Carbon	15K ohms 1/10W
R213-222	YWDXCTSJE472	Carbon	4.7K ohms 1/10W
R241	YWDXCTSJF103	Carbon	10K ohms 1/10W
R247	YWDXCTSJD101	Carbon	100 ohms 1/10W
R248-250	YWDXCTSJF153	Carbon	15K ohms 1/10W
R253	YWDXCTSJE202	Carbon	2K ohms 1/10W
R260,261	YWDXCTSJF103	Carbon	10K ohms 1/10W
R262-267	YWDXCTSJD201	Carbon	200 ohms 1/10W
R268-271	YWDXCTSJE102	Carbon	1K ohms 1/10W
R272-296	YWDXCTSJF103	Carbon	10K ohms 1/10W
R299-305	YWDXCTSJF103	Carbon	10K ohms 1/10W
C1-5	GRM40F104Z25	Ceramic	0.1 µF
C8	YWCX4F1HB4R7	Electrolytic	4.7 µF 50V
C9	EEVHA1C100R	Electrolytic	10 µF16V
C10	GRM40F104Z25	Ceramic	0.1 µF
C11	YWCX4F1HB4R7	Electrolytic	4.7 µF 50V
C12-15	GRM40F104Z25	Ceramic	0.1 µF
C16	GRM40CH100D5	Ceramic	10 pF
C17	GRM40F104Z25	Ceramic	0.1 µF
C18	GRM40CH100D5	Ceramic	10 pF
C19	GRM40F104Z25	Ceramic	0.1 µF
C21-23	GRM40F104Z25	Ceramic	0.1 µF
C25	GRM40F104Z25	Ceramic	0.1 µF
C27,28	GRM40F104Z25	Ceramic	0.1 µF
C29,30	GRM40CH100D5	Ceramic	10 pF
C31-35	GRM40F104Z25	Ceramic	0.1 µF
C38-40	GRM40F104Z25	Ceramic	0.1 µF
C41,42	GRM40CH100D5	Ceramic	10 pF
C43	YWCX2B1EF223	Ceramic	0.022 µF

REF. NO.	PART NO.	DESCRIPTION	
C44-48	GRM40F104Z25	Ceramic	0.1 µF
C53-55	GRM40F104Z25	Ceramic	0.1 µF
C57-61	YWCX2F1CG474	Ceramic	0.47 µF
C62,63	GRM40F104Z25	Ceramic	0.1 µF
C64-66	YWCX2F1CG474	Ceramic	0.47 µF
C67,68	GRM40F104Z25	Ceramic	0.1 µF
C69-71	YWCX2F1CG474	Ceramic	0.47 µF
C72-77	GRM40F104Z25	Ceramic	0.1 µF
C79	GRM40F104Z25	Ceramic	0.1 µF
C80-82	YWCX2F1CG474	Ceramic	0.47 µF
C83,84	GRM40F104Z25	Ceramic	0.1 µF
C86-88	YWCX2F1CG474	Ceramic	0.47 µF
C89,90	GRM40F104Z25	Ceramic	0.1 µF
C91	YWCX2F1CG474	Ceramic	0.47 µF
C92	GRM40F104Z25	Ceramic	0.1 µF
C93,94	YWCX2F1CG474	Ceramic	0.47 µF
C95,96	GRM40F104Z25	Ceramic	0.1 µF
C97	YWCX2F1CG474	Ceramic	0.47 µF
C98	GRM40F104Z25	Ceramic	0.1 µF
C99,100	YWCX2F1CG474	Ceramic	0.47 µF
C101-103	GRM40F104Z25	Ceramic	0.1 µF
C104-106	YWCX2C1HD101	Ceramic	100 pF
C107	GRM40F104Z25	Ceramic	0.1 µF
C108-110	YWCX2C1HD101	Ceramic	100 pF
C111-116	GRM40F104Z25	Ceramic	0.1 µF
C117	YWCX4F0JD101	Electrolytic	100 µF 6.3V
C118	GRM40F104Z25	Ceramic	0.1 µF
C119	YWCX4F0JD101	Electrolytic	100 µF 6.3V
C120	GRM40F104Z25	Ceramic	0.1 µF
C121-123	YWCX2C1HD101	Ceramic	100 pF
C124	GRM40F104Z25	Ceramic	0.1 µF
C125-127	YWCX2C1HD101	Ceramic	100 pF
C128	GRM40F104Z25	Ceramic	0.1 µF
C129-131	YWCX2C1HD101	Ceramic	100 pF
C132	GRM40F104Z25	Ceramic	0.1 µF
C133-135	YWCX2C1HD101	Ceramic	100 pF
C136--167	GRM40B472K50	Ceramic	4700 pF
C180	GRM40F104Z25	Ceramic	0.1 µF
C181	YWCX2F1CG474	Ceramic	0.47 µF
C182,183	GRM40F104Z25	Ceramic	0.1 µF
C200	GRM40F104Z25	Ceramic	0.1 µF
C202-209	GRM40F104Z25	Ceramic	0.1 µF
C210,211	YWCX4F0JD101	Electrolytic	100 µF 6.3V
L2-6	YWE2LFC328R2	Coil	
L8-11	YWE2LFC328R2	Coil	
L13-17	YWE2LFC328R2	Coil	
L19-31	YWE2LFC328R2	Coil	
SW1	YWF0EAH104L	Dip Switch	
SW5	YWSKHMPS	Push Switch	
SW7-15	YWF2SS22201A	Slide Switch	
NF1-20	YWNFA41R222	Filter	
NF22-51	YWNFA41R222	Filter	
NF52	YWDXAS8JC220	Resistor	
FB1,2	YWE5BSZBF503	Filter	
TPG1,2	YWG5LC2SBK	Terminal	

REF. NO.	PART NO.	DESCRIPTION
LG1,2	YWA2QA0134A4	Earth Lug
X1	YWZ6TR351536	Crystal
X2	YWZ6TR359.83	Crystal
X3	YWZ6TR351536	Crystal
BT1	YWZ7VL2330	Battery
CN1	YWG3504604	4-pin Connector
CN2	YWG3504603	3-pin Connector
CN3	YWG3IL4426SL	26-pin Connector
CN4,5	YWG3IL4420SL	20-pin Connector
CN7,8	YWG3DB25SLUM	25-pin Connector
CN10	YWG5P1319	6-pin Connector
CN11	YWG3DE09PLUM	9-pin Connector
CN13	YWG3B03PSVH	3-pin Connector
CN14-17	YWG396596604	6-pin Connector
CN18	YWG3DC37SLUM	37-pin Connector
CN101	YWG66412683	IC Socket
CN108	YWG66412673	IC Socket for IC18

POWER BOARD

REF. NO.	PART NO.	DESCRIPTION	
PCB4 (RTL)	JSX35PRZ3-2	Printed Circuit Board Assy	
IC1	YWA6FA5304P	IC	
IC21,22	YWA6TA76431S	IC	
Q1 ⚠	2SK2675	Transistor	
Q2,3 ⚠	YWPC123FY2	Photo-Coupler	
Q21	2SA1225Y	Transistor	
D1 ⚠	YWD3SB60	Diode	
D2,3	YWERB3710	Diode	
D4	YWSC2012	Diode	
D6	YWMTZK30A	Diode	
D21	YWB2D20SC9M	Diode	
D22	YWB2UDZ11BT7	Diode	
D23	YWB2D20SC9M	Diode	
D25,26	YWERA9102	Diode	
D28	DAP202KT7	Diode	
VS1 ⚠	ERZV07D471	Varistor	
R1	ERC12ZGM105	Carbon	100K ohms 1/2W
R2,3	ERF10TK2R2	Wire Wound	2.2 ohms 10W
R4	ERG3SJ331P	Metal	330 ohms 3W
R5	ERF5EKR22	Wire Wound	0.22 ohm 5W
R6	ERJ6GEYJ180	Carbon	18 ohms 1/10W
R7	ERG2SJ823P	Metal	82K ohms 2W
R8,9	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R10	ERJ6GEYJ182	Carbon	1.8K ohms 1/10
R11	ERJ6GEYJ391	Carbon	390 ohms 1/10W
R12	ERJ6GEYJ181	Carbon	180 ohms 1/10W
R13	ERJ6GEYJ104	Carbon	100K ohms 1/10W
R14	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R15	ERC12ZGM156	Carbon	15M ohms 1/2W
R17,18	ERJ14Y334H	Carbon	330K ohms 1/4W

REF. NO.	PART NO.	DESCRIPTION	
R19	ERJ6GEYJ470	Carbon	47 ohms 1/10W
R21	ERJ6GEYJ100	Carbon	10 ohms 1/10W
R23	ERG2SJ470P	Metal	47 ohms 2W
R24	ERJ6GEYJ470	Carbon	47 ohms 1/10W
R25	ERJ6GEYJ182	Carbon	1.8K ohms 1/10W
R26	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R27,28	YWDXMASDE562	Carbon	5.6K ohms 1/10w
R29	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R30	ERJ6GEYJ471	Carbon	470 ohms 1/10W
R31	ERJ6GEYJ331	Carbon	330 ohms 1/10W
R32	ERJ6GEYJ222	Carbon	2.2K ohms 1/10W
R33,34	YWDXMASDE562	Carbon	5.6K ohms 1/10W
R36	ERJ14YJ100H	Carbon	10 ohms 1/4W
R37	ERJ6GEYJ561	Carbon	560 ohms 1/10W
R39	ERJ6GEYJ43V	Carbon	430 ohms 1/10W
R40	ERJ14YJ100H	Carbon	10 ohms 1/4W
C1 ⚠	ECQU2A224MV	Plastic	0.22 µF 100V
C3-5 ⚠	ECKDRS332ME	Ceramic	3300 pF
C6 ⚠	ECQU2A224MV	Plastic	0.22 µF 100V
C7,8	ECOS2DB122EB	Electrolytic	1200 µF 3KV
C9,10	ECKD3F331KBP	Ceramic	330 pF
C11	ECKD3F101KBP	Ceramic	100 pF
C12	YWCX2B1EG104	Ceramic	0.1 µF
C13	YWCX2C1HD391	Ceramic	390 pF
C14	YWCX2F1CG474	Ceramic	0.47 µF
C15	GRM40B103K25	Ceramic	0.01 µF
C16	EEUFC1V390	Electrolytic	39 µF 35V
C17,18 ⚠	ECKDRS332ME	Ceramic	3300 pF
C19	ECKD3F331KBP	Ceramic	330 pF
C21	ECA1CHG471	Electrolytic	470 µF 16V
C22	EEUFC1A222	Electrolytic	2200 µF 10V
C23	EEUFC1A471	Electrolytic	470 µF 10V
C24	YWC4FC1AE102	Electrolytic	1000 µF 10V
C25	EEUFC1A471	Electrolytic	470 µF 10V
C26-28	YWCX2F1CG474	Ceramic	0.47 µF
C29	ECKD3F101KBP	Ceramic	100 pF
L1,2 ⚠	YWE5BP0R9F28	Coil	
L3,4	BL02RN2R62	Coil	2.6 µH
L6	ELESQ680KA	Coil	68 µH
L21,22	BL02RN2R62	Coil	2.6 µH
L23	YWCM06500G4	Coil	
L24	YWMSSX12X8A	Coil	
L25	TC1240	Coil	
L26	BL02RN2R62	Coil	
L27,28	YWE2SL101110	Coil	10 µH
SW1 ⚠	YWSDDFA3	Switch	
F1 ⚠	XBA2C40ET0A	Fuse	4A 250V
T1 ⚠	YWE018215D	Power Transformer	
CN1 ⚠	YWB2P3VH	2-pin Connector	
CN2	YWG3B04PVH	4-pin Connector	

REF. NO.	PART NO.	DESCRIPTION
CN3	YWG3B03PVH	3-pin Connector
CN4	YW5045-03A	Connector
CN5	YWG3B04PVH	4-pin Connector
E1,2 ⚠	S-N5057	Fuse Holder
E5-8 ⚠	YW841248	Cap for Capacitor
E3,4	YWA2QA0134	Earth Lug
E9	YWA2QA0134	Earth Lug
E11 ⚠	YW840522	Insulator Fuse Cap
M48	YWZ2PC1724C	Heat Sink for Q1
M49	YWZ2PC1747A	Heat Sink for D1,D2

SWITCH BOARD

PCB5 (RTL)	JSX35PRB1-1	Printed Circuit Board Assy	
D1-44	YW1SS355	Diode	
LED1,2	YWB3LN29RPP	LED	
LED3	LN39GPP	LED	
LED4	YWB3LN29RPP	LED	
LED5	LN320GP	LED	
R1-10	YWDXCTSJD301	Carbon	300 ohms
C1-4	YWCX2C1HE102	Ceramic	1000 pF
SW1	YWSKECFL	Push Swtich	
SW2-6	YWSKECAF	Push Switch	
SW7,8	YWSKECFL	Push Swtich	
SW9-24	YWSKECAF	Push Switch	
SW25	YWSKECFL	Push Swtich	
SW26-28	YWSKECAF	Push Switch	
SW29	YWSKECFL	Push Swtich	
SW30-39	YWSKECAF	Push Switch	
LG1,2	YWA2QA0134A4	Earth Lug	
E1-4	YWKGLDS50R	Spacer	
E5	YWKGLDS-40B	Spacer	
CN1,2	YWG3IL4420ST	20-pin Connector	
CN3,4	YWG3IL4408ST	8-pin Connector	

REF. NO.	PART NO.	DESCRIPTION

JOYSTICK BOARD

PCB6 (RTL)	JSX35PRC1-1	Printed Circuit Board Assy
VR1	YWD6RXJXCP14	Fader
CN6	G3IL4408SL	8-pin Connect

SWITCH SUB BOARD

PCB7 (RTL)	JSX35PRD1-1	Printed Circuit Board Assy
SW41	YWF4AT4149G	Seesaw Switch
SW42	YWF4M2T18B4	Seesaw Switch
CN5	YWG3IL4408ST	8-pin Connector

ACCESSORY PARTS / PACKAGING PARTS

M50	YWM990508B16	Rack Mounting Bracket
M51 ⚠	YWV8QA4898AN	Operating Instructions
M52	XZB26X40C05	Polyethylene Bag
M53	XSB4+10V	Screws
M54	XZB20X35A02	Polyethylene Bag
M55	YWPE80X90X1A	Polyethylene Bag
M56	YWM990508M03	Packaging
M57	YWV7SA2037A3	Packing Label

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